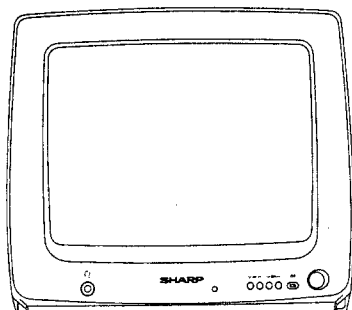


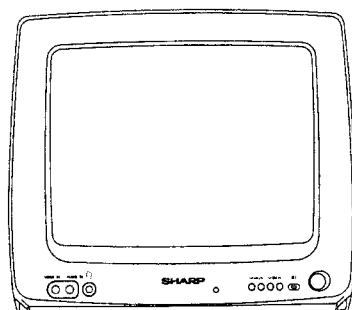
SHARP SERVICE MANUAL SERVICE-ANLEITUNG

SEGP37AM23S2/

5BS CHASSIS



37AM-23S



37AM-24S



PAL/SECAM SYSTEM COLOUR TELEVISION
PAL/SECAM SYSTEM FARBFERNSEHGERÄT

37AM-23S 37AM-24S

MODELS
MODELLE

In the interests of user-safety (required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (in einigen Länder durch Sicherheitsvorschriften gefordert) sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.

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IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be carried out by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10 k ohm resistor in series with an insulated wire (such as a test probe) between picture tube ground tag and high voltage lead (AC line cord should be disconnected from AC outlet).

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed.

1. When repairing the circuit, be sure not to increase the high voltage to more than 30.0 kV (at beam 1000 μ A) for the set.
2. To keep the set in a normal operation, be sure to make it function on 23.5 kV $\pm$ 1.5 kV (at beam 1000 μ A) in the case of the set. The set has been factory adjusted to the above mentioned high voltage. If there is a possibility that the high voltage fluctuates as result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types or brands which may cause excess X-Ray radiation.

BEFORE RETURNING THE RECEIVER

Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead insulation to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.

WICHTIGE SERVICE-HINWEISE

Wartung und Reparaturarbeiten an diesem Empfänger sollten nur von qualifizierten kundendiensttechnikern ausgeführt werden.

WARTUNG DES HOCHSPANNUNGSSYSTEMS UND DER BILDRÖHRE

Bei Wartung des Hochspannungssystems leiten Sie dessen Statische Aufladung durch Zwischenschalten eines 10-kiloohm-Widerstandes mit Hilfe eines isolierten Drahtes (wie z.B. einer Prüfsonde) zwischen die leitende Graphitschicht der Bildröhre und die 2. Anodenleitung ab. (Der Netzkabelstecker sollte dabei aus der Netzsteckdose gezogen werden.)

1. Für die Bildröhre in diesem Empfänger wird ein integrierter Implosionsschutz verwendet.
2. Ersetzen Sie die Bildröhre durch eine Röhre mit derselben Typennummer, um eine dauernde Sicherheit zu gewährleisten.
3. Heben Sie die Bildröhre nicht am Hals hoch.
4. Fassen Sie die Bildröhre nur dann an, wenn Sie eine splitterfreie Schutzbrille tragen und nachdem Sie die Hochspannung vollkommen ableiteten.

RÖNTGENSTRAHLUNG

Dieser Empfänger wurde so gebaut, daß Röntgenstrahlung auf einem absoluten Minimum gehalten wird. Da durch bestimmte Funktionsstörungen und Wartungsarbeiten beim längeren Ausgesetztsein in unmittelbarer Nähe eine eventuell gefährliche Strahlung verursacht werden kann, sollten die folgenden Vorsichtsmaßnahmen beachtet werden:

1. Beim Reparieren der Schaltung darauf achten, daß die Stromstärke für das Gerät auf nicht mehr als 30,0 kV (Strahlstrom = 1000 μ A) erhöht wird.
2. Um das Gerät in normalen Betriebszustand zu halten, darauf achten, daß die Hochspannung 23,5 kV $\pm$ 1,5 kV (Strahlstrom = 1000 μ A) beträgt. Das Gerät wurde im Werk auf die obenerwähnte Hochspannung eingestellt. Falls die Möglichkeit besteht, daß die Hochspannung infolge von Reparaturarbeiten schwankt, niemals vergessen, nach Beendigung der Arbeiten die Hochspannung zu überprüfen.
3. Die Bildröhre darf nicht gegen andere Typen oder Bildröhren anderer Firmen ausgetauscht werden, da diese übermäßig hohe Röntgenstrahlung verursachen könnten.

VOR RÜCKGABE DES EMPFÄNGERS

Bevor der Empfänger an den Kunden zurückgegeben wird, sollten Sie die folgenden Sicherheitsüberprüfungen vornehmen.

1. Überprüfen Sie sämtliche Leitungen, um sich zu vergewissern, daß diese nicht eingeklemmet sind, oder daß sich keine Kleinteile zwischen dem Chassis und anderen Metallteilen im Empfänger befinden.
2. Überprüfen Sie sämtliche Schutzvorrichtungen, wie z.B. die nichtmetallischen Reglerknöpfe, Isolierpapiere, Gehäuserückseiten, Einstell- und Zwischenraumabdeckungen oder Abschirmungen, Isolierwiderstands-Kapazitätsnetzwerke, mechanische Isolatoren usw.

SERVICE ADJUSTMENT

■ SERVICE MODE FUNCTION

This mode function is provided to assist with the settings of those adjustments that may vary from one Picture Tube to another, or between models.

In order to use the Service Mode

1. Press main switch to OFF.
2. Connect Test Pattern signal to antenna terminal.
3. Press ∇ $\triangleleft$ and CH $\triangleleft$ buttons and main switch to ON simultaneously.
4. —SERV— will appear on screen. Service mode is now entered.
5. Select adjustment using buttons $\triangleleft$ CH ∇ .

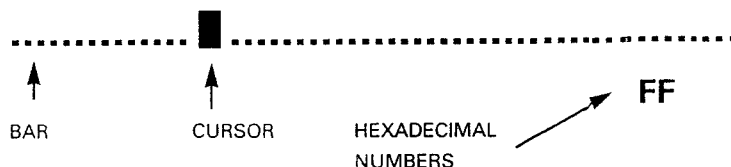
To exit service mode, press main switch to OFF or press MODE button on R/C.

	Displayed on Screen	Hexadecimal Range	Function
a.	—SERV—		Indicates operative Service Mode.
b.	AGC	00 ~ FF	Auto Gain Control.
c.	AFT	00 ~ FF	Auto Frequency Control
d.	BL PHA	00 ~ 3F	Blanking Pulse shift.
e.	VER PO	00 ~ 3F	Vertical Position shift.
f.	VER AM	00 ~ 3F	Vertical Amplitude shift.
g.	VER SM	00 ~ 3F	Vertical Symmetry alteration.
h.	LUMA-D	00 ~ 05	Luma Delay
i.	GII		Indication of G2 adjustment.
j.	V-B-CO	00 ~ 3F	Vertical Breathing Correction (DON'T TOUCH).
k.	GAIN R	00 ~ 3F	Red Gain.
l.	GAIN G	00 ~ 3F	Green Gain.
m.	GAIN B	00 ~ 3F	Blue Gain.
	NVM		Access to NVM memory.

6. For "a" thru "l" selections.

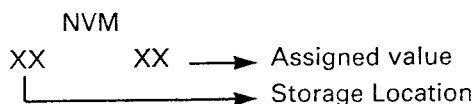
Adjustment to a selection can be made by pressing buttons $\triangleleft$ $\triangleleft$ ∇ . (Not for GII adjustment).

A colour bar is displayed on the OSD to indicate the adjustment position, together with hexadecimal numbers (Not for GII adjustment).



For "m" Selection.

NVM storage location settings variants.



In order to have access to the desired storage location, buttons $\triangleleft$ $\triangleleft$ ∇ should be pressed, as required, to obtain a higher or lower location, respectively. Bear in mind that, for storage location indication a hexadecimal numerical system is used, instead of a decimal system.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, ... 19, 1A, 1B, 1C, 1D, 1E, 1F, 20, 21, ... 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, ... B0, ... C0, ... D0, ... E0, ... F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF.

From the last location FF to the first 00 can be reached by increasing and from first to last by decreasing. Once the storage location to be varied has been selected, its value can be modified by the bits that form part of the storage location numerical buttons, numbers $\boxed{0}$ to $\boxed{7}$, respectively. This switches its binary number from and between 0 and 1 each time one of the buttons is pressed.

$$\boxed{0} = 2^0 = 1, \quad \boxed{1} = 2^1 = 2, \quad \boxed{2} = 2^2 = 4, \dots$$

NVM MAP

ADD (HEX)	DESCRIPTION																
00	RED COLOUR TEMPERATURE																
01	GREEN COLOUR TEMPERATURE																
02	BLUE COLOUR TEMPERATURE																
03	VERTICAL POSITION																
04	HORIZONTAL PHASE CONTROL																
05	VERTICAL AMPLITUDE																
06	VERTICAL BREATHING CORRECTION																
07	VERTICAL LINEARITY																
08	LUMA DELAY PAL																
09	LUMA DELAY SECAM																
0A	AGC																
0B	OPTIONS: <table><tr><td>ING_OSD</td><td>A_F</td><td>CHL</td><td>PAL</td><td>UHF</td><td>T_LOCK</td><td>AV_F</td><td>FP</td></tr><tr><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr></table> 0: FP: SYSTEM B/G (0) - B/G+L, MESSAGE RECHERCHE (1) 1: AV FRONTAL: NOT INCLUDED (0), INCLUDED (1) 2: TUNING LOCK: LOCKED (1), NOT LOCKED (0) 3: UHF ONLY: BAND UHF (1) - ALL BANDS (0) 4: PAL ONLY (1), PAL+SECAM (0) 5: CHILD LOCK: CHILD LOCK ACTIVE (1) CHILD LOCK NO ACT (0) 6: AUTO FIRST: TUNING FIRST MENU: AUTO (1) MANUAL (0) 7: ING_OSD: OSD_INGLES (1) OSD_SYMBOL (0)	ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP	7	6	5	4	3	2	1	0
ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP										
7	6	5	4	3	2	1	0										
0C	AFT ADJUSTMENT VALUE (B/G, L SYSTEMS)																
0D	AFT ADJUSTMENT VALUE (L' SYSTEM)																
0E	MAXIMUM VOLUME LIMIT																
0F	FIRM																
10	RED COLOUR TEMPERATURE																
11	GREEN COLOUR TEMPERATURE																
12	BLUE COLOUR TEMPERATURE																
13	VERTICAL POSITION																
14	HORIZONTAL PHASE CONTROL																
15	VERTICAL AMPLITUDE																
16	VERTICAL BREATHING CORRECTION																
17	VERTICAL LINEARITY																

ADD (HEX)	DESCRIPTION																
18	LUMA DELAY PAL																
19	LUMA DELAY SECAM																
1A	AGC																
1B	OPTIONS: <table><tr><td>ING_OSD</td><td>A_F</td><td>CHL</td><td>PAL</td><td>UHF</td><td>T_LOCK</td><td>AV_F</td><td>FP</td></tr><tr><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr></table> 0: FP: SYSTEM B/G (0) - B/G+L, MESSAGE RECHERCHE (1) 1: AV FRONTAL: NOT INCLUDED (0), INCLUDED (1) 2: TUNING LOCK: LOCKED (1), NOT LOCKED (0) 3: UHF_ONLY: BAND UHF (1) - ALL BANDS (0) 4: PAL_ONLY (1), PAL+SECAM (0) 5: CHILD LOCK: CHILD LOCK ACTIVE (1) CHILD LOCK NO ACT (0) 6: AUTO FIRST: TUNING FIRST MENU: AUTO (1) MANUAL (0) 7: ING_OSD: OSD_INGLES (1) OSD_SYMBOL (0)	ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP	7	6	5	4	3	2	1	0
ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP										
7	6	5	4	3	2	1	0										
1C	AFT ADJUSTMENT VALUE (B/G, L SYSTEMS)																
1D	AFT ADJUSTMENT VALUE (L' SYSTEM)																
1E	MAXIMUM VOLUME LIMIT																
1F	FIRM																
20	RED COLOUR TEMPERATURE																
21	GREEN COLOUR TEMPERATURE																
22	BLUE COLOUR TEMPERATURE																
23	VERTICAL POSITION																
24	HORIZONTAL PHASE CONTROL																
25	VERTICAL AMPLITUDE																
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28	LUMA DELAY PAL																
29	LUMA DELAY SECAM																
2A	AGC																
2B	OPTIONS: <table><tr><td>ING_OSD</td><td>A_F</td><td>CHL</td><td>PAL</td><td>UHF</td><td>T_LOCK</td><td>AV_F</td><td>FP</td></tr><tr><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td></tr></table> 0: FP: SYSTEM B/G (0) - B/G+L, MESSAGE RECHERCHE (1) 1: AV FRONTAL: NOT INCLUDED (0), INCLUDED (1) 2: TUNING LOCK: LOCKED (1), NOT LOCKED (0) 3: UHF_ONLY: BAND UHF (1) - ALL BANDS (0) 4: PAL_ONLY (1), PAL+SECAM (0) 5: CHILD LOCK: CHILD LOCK ACTIVE (1) CHILD LOCK NO ACT (0) 6: AUTO FIRST: TUNING FIRST MENU: AUTO (1) MANUAL (0) 7: ING_OSD: OSD_INGLES (1) OSD_SYMBOL (0)	ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP	7	6	5	4	3	2	1	0
ING_OSD	A_F	CHL	PAL	UHF	T_LOCK	AV_F	FP										
7	6	5	4	3	2	1	0										

37AM-23S**37AM-24S**

ADD (HEX)	DESCRIPTION
2C	AFT ADJUSTMENT VALUE (B/G, L SYSTEMS)
2D	AFT ADJUSTMENT VALUE (L' SYSTEM)
2E	MAXIMUM VOLUME LIMIT
2F	FIRM
30	TABLE LONG
31	FIRM
32	AGING ON. AUTOMATIC SWITCH ON.
33	SWITCH ON DELAY TIME
34	VOLUME
35	CONTRAST
36	COLOUR
37	BRIGHTNESS
38	PEAKING (RANGE: 0-7)
39	ACTUAL PROGRAMM
3A	TV STATE ON/OFF
3B	DECIMAL VOLUME VALUE (FACTORY PRESET)
3C	CONTRAST (FACTORY PRESET)
3D	COLOUR (FACTORY PRESET)
3E	BRIGHTNESS (FACTORY PRESET)
3F	PEAKING (RANGE: 0-7) (FACTORY PRESET)
40	ON TIMER LAST VALUE
41	OFF TIMER LAST VALUE

ADD (HEX)	DESCRIPTION
42-B9	PROGRAMS
BA	OSD STATE (X,X,X,X,X, CHILD_FRONT, CHILD_AV, NORM ON/OFF)
BB	BKGD USER'S CORRECTION (NOT USED IN THIS MODEL)
BC	BKGD USER'S CORRECTION PRESET VALUE (NORMALIZED) (")
BD	VOLTAGE LIMIT BETWEEN L'-L SYSTEMS (MSB)
BE	VOLTAGE LIMIT BETWEEN L'-L SYSTEMS (LSB)
BF	HORIZONTAL OSD OFFSET
C0	PROG SEARCH SPEED (ALL BANDS) -HIGH NIBBLE COMPLEMENTED-
C1	PROG SEARCH SPEED (UHF BAND) -HIGH NIBBLE COMPLEMENTED-
C2	PROG SEARCH SPEED (VHL BAND) -HIGH NIBBLE COMPLEMENTED-
C3	PROG SEARCH SPEED (VHH BAND) -HIGH NIBBLE COMPLEMENTED-
C4	CHANNEL RANGE IN FACTORY AUTOINSTALL
C5	PASSWORD ON(1)/OFF(0)
C6	PASSWORD FIRST DIGIT
C7	PASSWORD SECOND DIGIT
C8	PASSWORD THIRD DIGIT
C9	PASSWORD FOURTH DIGIT
CA-FF	FREE

7. The changes introduced are automatically memorized.
8. Having finalized adjustments, push **MODE** button on R/C to exit Service Mode.

■ PIF / AGC Adjustment

1. VCO + AFT Adjustment

1. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal.
 - SSG output: 38.9 MHz (CW) ± 5 kHz).
 - SSG output level: approx. 90 dB μ V.
2. Enter into Service Mode.
3. Push CH $\wedge$ until AFT appears.
4. Press $\square$ / $\rightarrow$ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again, setting is now memorized.

2. RF-AGC Cut-In Adjustment (I2C BUS)

1. Receive the "COLOUR BAR" signal (Channel E-12).
 - Signal strength: 57 dB μ V.
2. Enter into Service Mode.
3. Push CH $\wedge$ until AGC appears.
4. Press $\square$ / $\rightarrow$ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again, setting is now memorized.

■ Screen Adjustment

3. Focus Adjustment

1. Apply mains voltage of 220 V AC/50 Hz to TV.
2. Receive Phillips pattern signal to a level between 60 and 80 dB μ V.
3. Set contrast to 10/10, brightness to 5/10 and colour 0/10.
4. Adjust focus potentiometer to obtain maximum definition.

4. G2 Adjustment

1. Apply mains voltage of 220 V AC/50 Hz to TV.
2. Receive black screen signal to a level between 60 and 80 dB μ V.
3. Set contrast to 10/10, brightness to 0/10 and colour 0/10.
4. Enter into Service Mode.
5. Push CH $\wedge$ until GII appears.
6. Increase G2 potentiometer until flyback appears on screen, and OSD bar is at maximum.
7. Adjust G2 potentiometer until OSD bar is at half way position on screen.
8. Exit Service Mode.

■ GEOMETRY ADJUSTMENT PROCEDURE

1. "BL PHA".

- Receive Philips pattern signal.
- When $\triangle/\wedge$ button is pressed, picture moves to the left.
- When $\triangle/V$ button is pressed, picture moves to the right.
- Adjust the horizontal location to obtain picture centering (fig. 1).

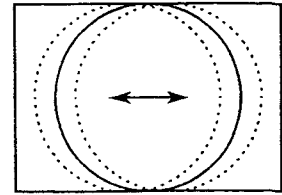


Fig. 1

2. "VER PO".

- Receive Philips pattern signal.
- When $\triangle/\wedge$ button is pressed, picture moves up.
- When $\triangle/V$ button is pressed, picture moves down.
- Adjust the horizontal location to obtain picture centering (fig. 2).

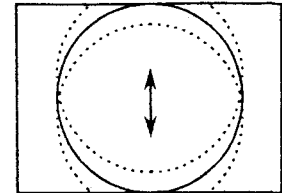


Fig. 2

3. "VER AM".

- Receive Philips pattern signal.
- When $\triangle/\wedge$ button is pressed, vertical size of picture increases.
- When $\triangle/V$ button is pressed, vertical size of picture decreases.
- Adjust the vertical size to obtain overscan (fig. 3).

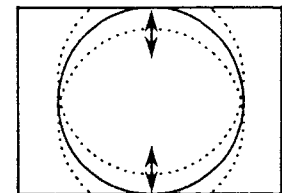


Fig. 3

4. "VER SM".

- Receive Philips pattern signal.
- When $\triangle/\wedge$ button is pressed, upper picture scanning decreases and lower picture scanning increases.
- When $\triangle/V$ button is pressed, upper picture scanning increases and lower picture scanning decreases.
- Adjust the vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 4).

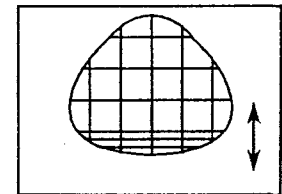


Fig. 4

COLOUR ADJUSTMENT

5. "LUMA D".

- Receive Philips pattern signal.
- When $\triangle/\wedge$ button is pressed, luma phase delays.
- When $\triangle/V$ button is pressed, chroma phase delays.
- Adjust the chroma-luma delay.

The following adjustments are only required when the Picture Tube is changed.

6. "GAIN R", "GAIN G", "GAIN B".

- Adjust G2.
- Tune in white card.
- Adjust colour to minimum.
- Position colourmeter in the center of screen.
- Using brightness and contrast buttons, select a luminance of ≈ 120 nits.
- Operate again in Service Mode and select location GAIN R, GAIN G, GAIN B to obtain colour coordinates:
 $X = 0.290 \pm 0.015$
 $Y = 0.284 \pm 0.015$
- Exit Service Mode and check colour coordinates 'X' and 'Y' at 20 and 120 NITS. It may be necessary to repeat procedure.

NOTE:

Locations: GAIN R alter 'X' coordinate; GAIN G alter the 'Y' coordinates; GAIN B alter the 'X' and 'Y' coordinates.

■ CHILD LOCK CANCEL (only for 37AM-24S)

The following process describes how to cancel actual password (PIN) when the customer forgets code.

1. Switch ON TV set.
2. Press buttons ∇ $\triangleleft$ on TV and $\square$ / $\rightarrow$ on R/C simultaneously.
3. Press MODE button on R/C to input menu.
4. Using buttons $\wedge$ CH ∇ move to $\rightarrow$ position.
5. Press MODE button again.
6. Select PIN and input new PIN (Please do not forget it)
7. Select EXIT and press MODE button again.

SERVICE-EINSTELLUNG

■ DIE SERVICE FUNKTION

Die Modus Funktion ist integriert worden, um die Einstellungen zu vereinfachen, welche von einer Bildröhre zu ein anderen variieren können, oder zwischen verschiedenen Modellen.

Um die Service Funktion zu benutzen:

1. Gerät über Hauptnetzschalter ausschalten.
2. Schließen Sie das Test-Bild-Signal am Antenneneingang an.
3. $\wedge$ $\triangleleft$ und CH ∇ gleichzeitig drücken und dabei das Gerät über Hauptnetzschalter einschalten.
4. Auf dem Bildschirm erscheint —SERV—. Der Service-Mode ist nun eingestellt.
5. Wählen Sie die Einstellung mit den Tasten $\wedge$ CH ∇ .

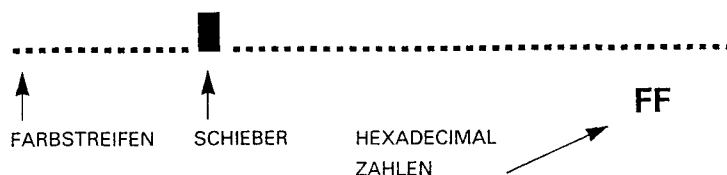
Um den Service-Mode zu verlassen, das Gerät über Hauptnetzschalter ausschalten.

	Auf dem Bildschirm erscheint	Hexadezimal Bereich	Funktion
	—SERV—		Zeigt die Service-Betriebarten an.
a.	AGC	00 ~ FF	Autom Verstärkungs-Regelung.
b.	AFT	00 ~ FF	Autom Frequenz Controlle.
c.	BL PHA	00 ~ 3F	Veränderung der Shift Phase.
d.	VER PO	00 ~ 3F	Veränderung der Senkrechte Stellung.
e.	VER AM	00 ~ 3F	Veränderung der Senkrechte Ausdehnung.
f.	VER SM	00 ~ 3F	Veränderung der Senkrechte Symmetrie.
g.	LUMA-D	00 ~ 05	Verzögerung Verzerrung Chroma-Luma.
h.	GII		Anzeiger Veränderung der G2.
i.	V-B-CO	00 ~ 3F	Vertikal Linearität (Nicht berühren).
j.	GAIN R	00 ~ 3f	Rot Verstärkung.
k.	GAIN G	00 ~ 3F	Grün Verstärkung.
l.	GAIN B	00 ~ 3F	Blau Verstärkung.
m.	NVM		Zugang der NVM Speicher.

6. "a" zu "l".

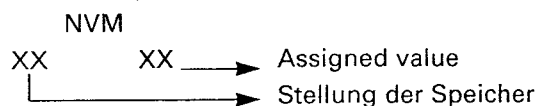
Stellen Sie den gewünschten Wert mit der Taste $\wedge$ $\triangle$ $\vee$ ein.

Ein Farbstreifen zusammen mit dem Kurser ist auf dem Bildschirm zu sehen, welcher Anzeigt welche Position eingestellt ist [MIN-MAX] zusammen mit hexadezimal Zahlen. (Nicht für GII Einstellung).



"m".

Veränderung der Werte der NVM Speicher.



Um die Stellung der Speicher zu verändern ist die Taste $\wedge$ $\vee$ zu drücken, Beachten Sie, daß die Speicheranzeige über ein hexadecimales System arbeitet.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, ... 19, 1A, 1B, 1C, 1D, 1E, 1F, 20, 21, ... 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, ... B0, ... C0, ... D0, ... E0, ... F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF.

Von der letzten Stellung "FF" aus, kann "00" erreicht werden durch erhöhen des Wertes und umgekehrt durch Verringerung. Wenn Sie die gewünschte Speicher-Stellung ausgewählt haben, können Sie den Wert verändern mit den "Bits", die momentan im Speicher sind. Dafür benutzen wir die numerische Tasten "0-7".

Die Tasten $\boxed{0}$ - $\boxed{7}$ verändern die «Bits» 0-7, indem Sie ihren Wert zwischen 0 und 1 ändern jedesmal wenn man eine der Tasten drückt.

$$\boxed{0} = 2^0 = 1, \quad \boxed{1} = 2^1 = 2, \quad \boxed{2} = 2^2 = 4, \dots$$

NVM-ÜBERSICHT

Siehe auch Seite 6-9.

- Die Änderungen werden automatisch abgespeichert.
- Wenn die Einstellungen beendet sind, drücken Sie die Taste "Mode", um die Service-Betriebsart zu verlassen.

■ ZF/AGC Einstellung

1. VCO + AFT Einstellung

- Verbinde den Ausgang vom standard HF-Generator zum Tuner-Aushopplung.
 - HF-Generator Ausgang: 38.9 MHz $\pm$ 5 kHz).
 - Ausgangspegel: 90 dB μ V.
 - Einspeisung: Direkt.
- Service Mode einstellen.
- Drücke CH $\wedge$ bis AFT erscheint.
- Drücke $\boxed{\blacksquare}$ / $\boxed{\blacktriangleleft}$ Knopf auf das Fernbedienungs. Einstellung geschieht automatisch. Während der Einstellung ändert der Farbstreifen seine Farbe von rot nach gelb. Ist die Einstellung beendet verschwindet der Farbstreifen und B-Stop (bus stop) wird auf dem Bildschirm gezeigt.
- Schalter aus-und einschalten, die Einstellung ist nun gespeichert.

2. RF-AGC Einstellung

- Empfangen von einem Farbtestbild (Kanal 12).
 - HF-Pegel: 57 dB μ V.
- Service Mode einstellen.
- Drücke CH $\wedge$ bis AGC erscheint.
- Drücke $\boxed{\blacksquare}$ / $\boxed{\blacktriangleleft}$ Knopf auf Fernbedienung. Einstellung geschieht automatisch. Während der Einstellung ändert sich die Farbe des Streifens von rot nach gelb. Nach Beendigung der Einstellung verschwindet der Farbstreifen und B-Stop erscheint auf dem Bildschirm.
- Schalter aus-und einschalten, die Einstellung ist gespeichert.

■ Bildschirm Einstellung:

3. Fokus:

1. Legen Sie die Netzspannung von 220 V/50 Hz an das Fernsehgerät.
2. Empfangen Sie das Philips-Test-Bild.
(Signalniveau zwischen 60 und 80 dB.).
3. Stellen Sie den Kontrast auf die Maximalstellung (10/10), stellen Sie die Helligkeit auf die Mittelstellung (5/10) und stellen Sie die Farbe auf die Minimalstellung (0/10).
4. Stellen Sie das Potentiometer für den Fokus so ein, daß Sie die beste Fokusposition erhalten.

4. G 2:

1. Legen Sie die Netzspannung von 220 V/50 Hz an das Fernsehgerät.
2. Empfangen Sie das Schwarzsinal.
(Signalniveau zwischen 60 und 80 dB).
3. Stellen Sie den Kontrast auf die Maximalstellung (10/10), stellen Sie die Helligkeit auf die Minimalstellung (0/10) und stellen Sie die Farbe auf die Minimalstellung (0/10).
4. Schalten Sie auf den Service-Betrieb.
5. Betätigen Sie die Taste "CH", bis die Anzeige "G II" auf dem Bildschirm erscheint.
6. Erhöhen Sie die G 2 Spannung, bis Rücklaufstreifen auf dem Bildschirm erscheinen und die OSD-Anzeige auf Maximum ist.
7. Justieren Sie G II Potentiometer, bis der OSD-Anzeige balken an der Mittelposition stehen.
8. Verlassen Sie den Service-Betrieb.

■ GEOMETRIE - EINSTELLUNG

1. "BL PHA".
 - a) Empfangen Sie das Philips-Test-Bild.
 - b) Wenn Sie den $\triangle/\backslash$ drücken, so bewegt sich das Bild nach rechts.
 - c) Wenn Sie den $\triangle/V$ drücken, so bewegt sich das Bild nach links.
 - d) Stellen Sie die horizontale Position so ein, daß Sie eine Bildzentrierung erhalten (Bild 1).
2. "VER PO".
 - a) Empfangen Sie das Philips-Test-Bild.
 - b) Wenn Sie den $\triangle/\backslash$ drücken, so bewegt sich das Bild nach oben.
 - c) Wenn Sie den $\triangle/V$ drücken, so bewegt sich das Bild nach unten.
 - d) Stellen Sie die vertikale Position so ein, daß Sie eine Bildzentrierung erhalten (Bild 2).
3. "VER AM".
 - a) Empfangen Sie das Philips-Test-Bild.
 - b) Wenn Sie den $\triangle/\backslash$ drücken, so vergrößert sich die vertikale Größe des Bildes.
 - c) Wenn Sie den $\triangle/V$ drücken, so verkleinert sich die vertikale Größe des Bildes.
 - d) Stellen Sie die vertikale Bildgröße so ein, daß Sie eine optimale Abtastung (overscan) erhalten (Bild 3).
4. "VER SM".
 - a) Empfangen Sie das Philips-Test-Bild.
 - b) Wenn Sie den $\triangle/\backslash$ drücken, so verringert sich die Linearität des unteren Bildes und die Linearität des unteren Bildes vergrößert sich.
 - c) Wenn Sie den $\triangle/V$ drücken, so vergrößert sich die Linearität des oberen Bildes und die Linearität des oberen Bildes verringert sich.
 - d) Stellen Sie die vertikale Symetrie so ein, daß Sie eine symmetrische Linearität zwischen oberen und unteren Bild erhalten (Bild 4).

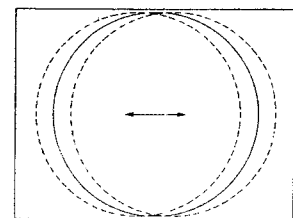


Bild 1

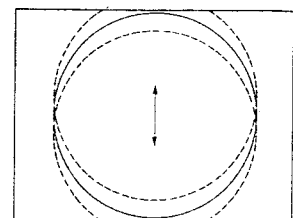


Bild 2

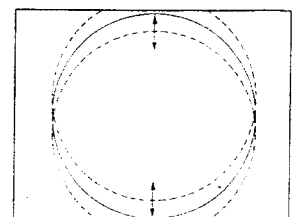


Bild 3

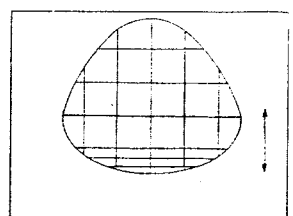


Bild 4

FARB - EINSTELLUNG

5. "LUMA D".

- Empfangen Sie das Philips-Test-Bild.
- Wenn Sie den  drücken, so verzögert sich die Luma-Phase.
- Wenn Sie den  drücken, so verzögert sich die chromatische Verzerrungs-Phase.
- Stelle Sie die Verzögerung Verzerrung Chroma-Luma ein.

Nur einstellen wenn die Bildröhre gewechselt wurde.

6-8. "GAIN R", "GAIN G", "GAIN B".

- Stellen Sie G2 ein.
- Empfangen Sie ein weißes Bild.
- Stelle Sie den Farbmesser in die Mitte des Bildschirmes.
- Stellen Sie die Tasten Kontrast und Helligkeit so ein daß eine Luminanz von ≈ 120 NITS erreicht wird.
- Gehen Sie nochmals in den Service-Mode, und mit der Position GAIN R, GAIN G, GAIN B stellen Sie die Farbkoordinaten.

$$X = 0,290 \pm 0,015$$

$$Y = 0,284 \pm 0,015$$

- Verlassen Sie den Service-Mode und überprüfen Sie die Farbkoordinaten 'X' und 'Y' von 20 bis 120 NITS. Es kann möglich sein die Einstellung nochmals durchzuführen.

HINWEIS:

Die Positionen: GAIN R verändern die Koordinate 'X'; GAIN G verändern die Koordinaten 'Y'; GAIN B verändern die Koordinaten 'X' und 'Y'.

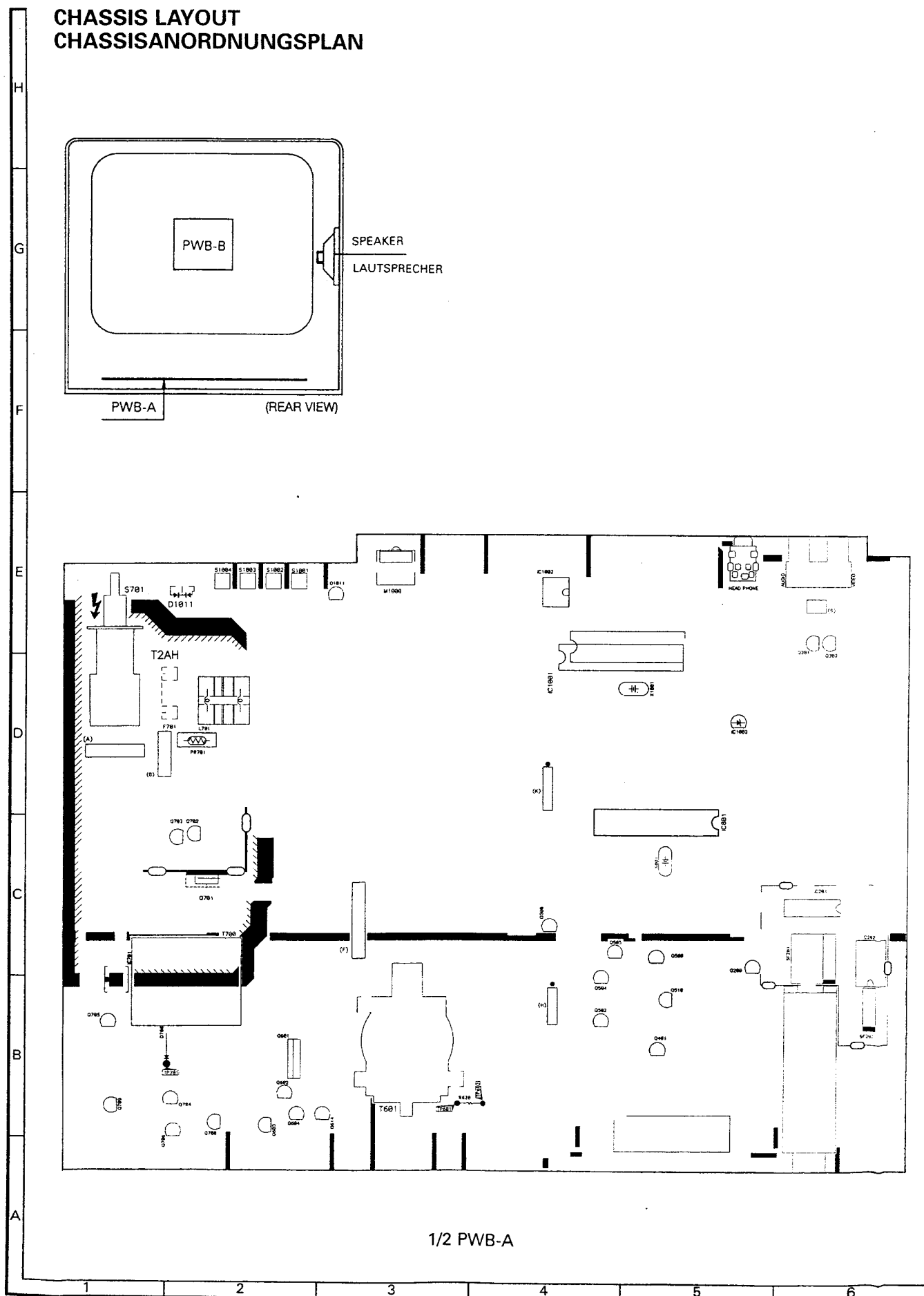
■ KINDERSICHERUNG LÖSCHEN (Nur 37AM-24S)

Folgend wird beschrieben wie das aktuelle "PASSWORD" (PIN) gelöscht wird, wenn der Kunde den Code vergessen hat.

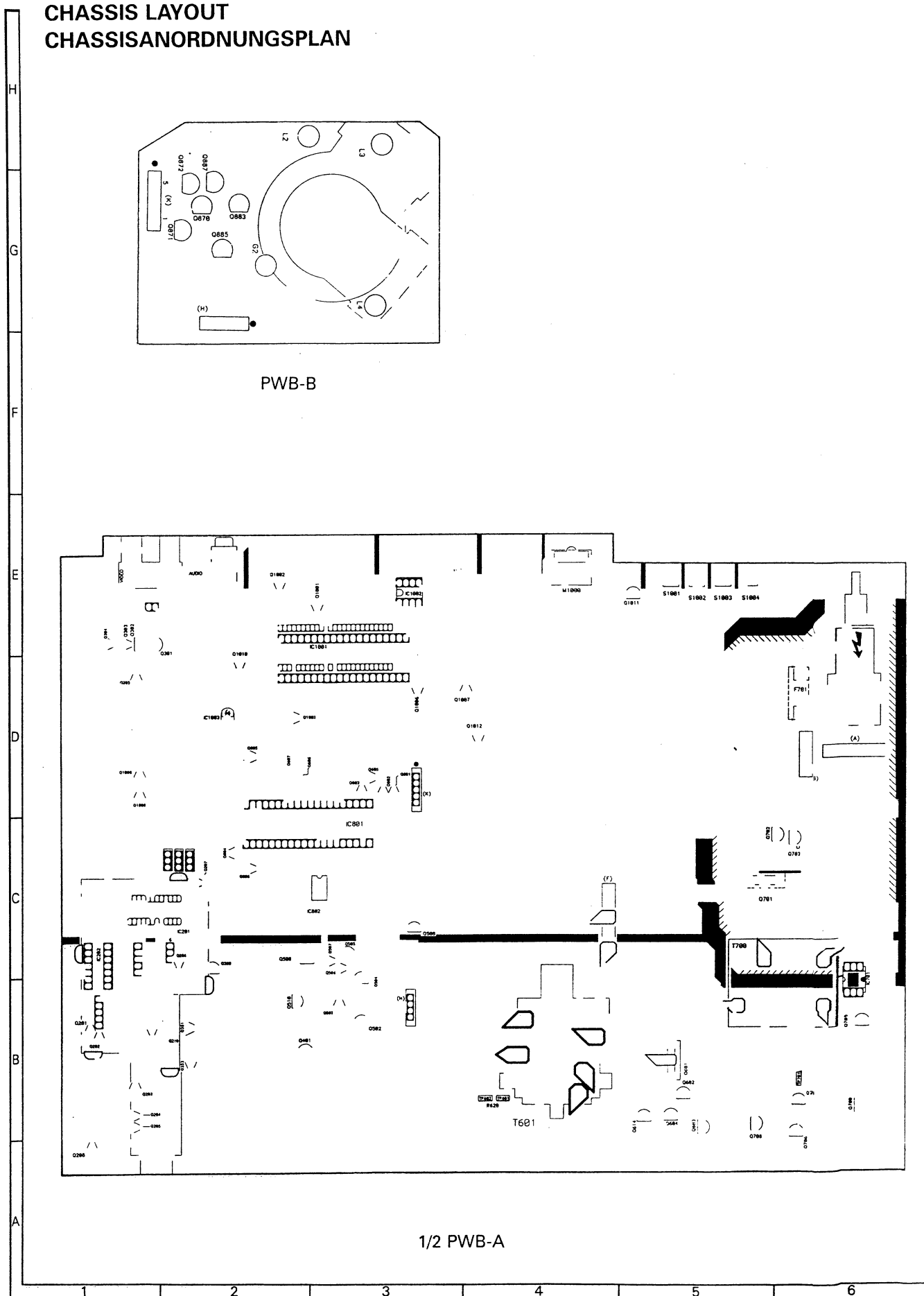
- Gerät einschalten.
- Drücke Knopf  AM Fernseher und  /  auf der Fernbedienung zur gleichen zeit.
- Drücke "MODE" Knopf auf der Fernbedienung um Menu Einzugeben.
- Drücke Knöpfe  CH  zur  FUNKTION.
- Drücke "MODE" Knopf nochmals.
- Suche "PIN" und Gebe neue Pin zahl ein (Bitte nicht vergessen)
- Suche "EXIT" und Drücke Nochmals "MODE" Knopf.

37AM-23S
37AM-24S

CHASSIS LAYOUT CHASSISANORDNUNGSPLAN

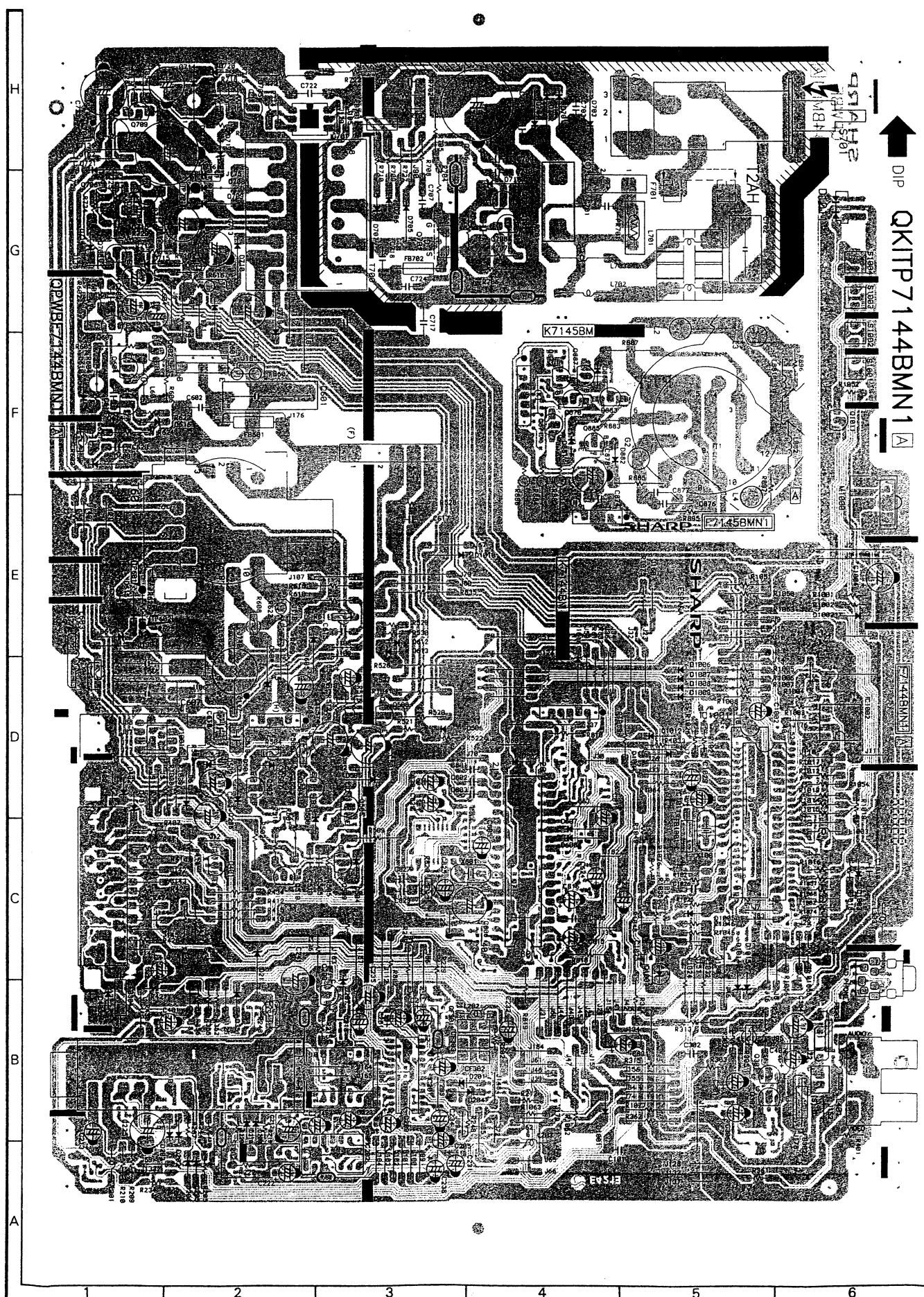


CHASSIS LAYOUT CHASSISANORDNUNGSPLAN



37AM-23S
37AM-24S

PRINTED WIRING BOARD LEITERPLATTENEINHEIT



37AM-23S 37AM-24S

DESCRIPTION OF SCHEMATIC DIAGRAM

SAFETY NOTE:

1. DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.
2. SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.

IMPORTANT SAFETY NOTICE:

PARTS MARKED WITH "△" () ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

Service precaution:

The area enclosed by this line (---) is directly connected with AC Mains Voltage. When servicing the area connect an isolating transformer between TV receiver and AC line to eliminate hazard of electric shock.

NOTE:

1. The unit of resistance "ohm" is omitted ($k = 1000$ ohms, $M = \text{Megaohm}$).
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors μF , unless otherwise noted ($p = \mu F$).

WAVEFORM MEASUREMENT CONDITIONS

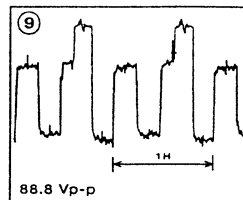
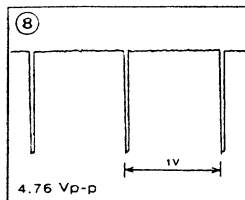
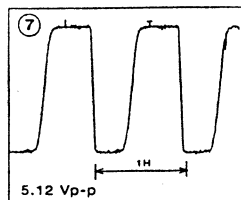
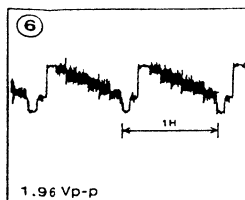
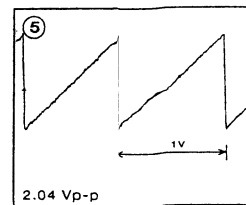
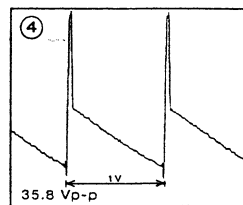
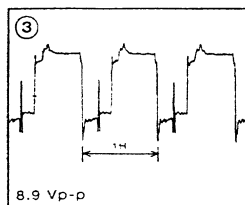
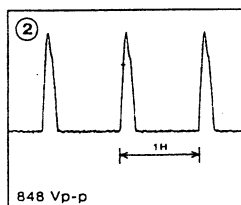
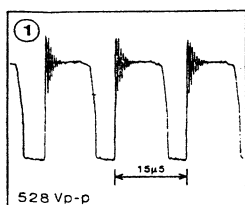
Colour bar generator signal of 70 dB from RF input.

ANMERKUNG:

1. Der Widerstandswert "Ohm" wurde in dem Plan ausgelassen ($k = 1000$ Ohms, $M = \text{Megaohm}$).
2. Falls nicht anders angegeben, handelt es sich bei den Widerständen um 1/8 Watt-Ausführungen.
3. Falls nicht anders angegeben, handelt es sich bei den Kondensatoren um μF -Typen ($p = \mu F$).

SIGNALFORMMESSUNGEN

Das Farbbalkensignal von 70 dB aus RF Eingang.



BESCHREIBUNG DES SCHEMATISCHEN SCHALTPLANS

SICHERHEITSANMERKUNGEN:

1. VOR DEM AUSWECHSELN VON TEILEN MUSS UNBEDINGT DER NETZSTECKER AUS DER NETZSTECKDOSE GEZOGEN WERDEN.
2. DIE WÄRMEABLEITER DER HALBLEITER SOLLTEN BEIM BETRIEB DES CHASSIS ALS MÖGLICHE URSACHEN VON GEFÄHRLICHEN ELEKTRISCHEN SCHLÄGEN BETRACHTET WERDEN.

WICHTIGE SICHERHEITSANMERKUNGEN

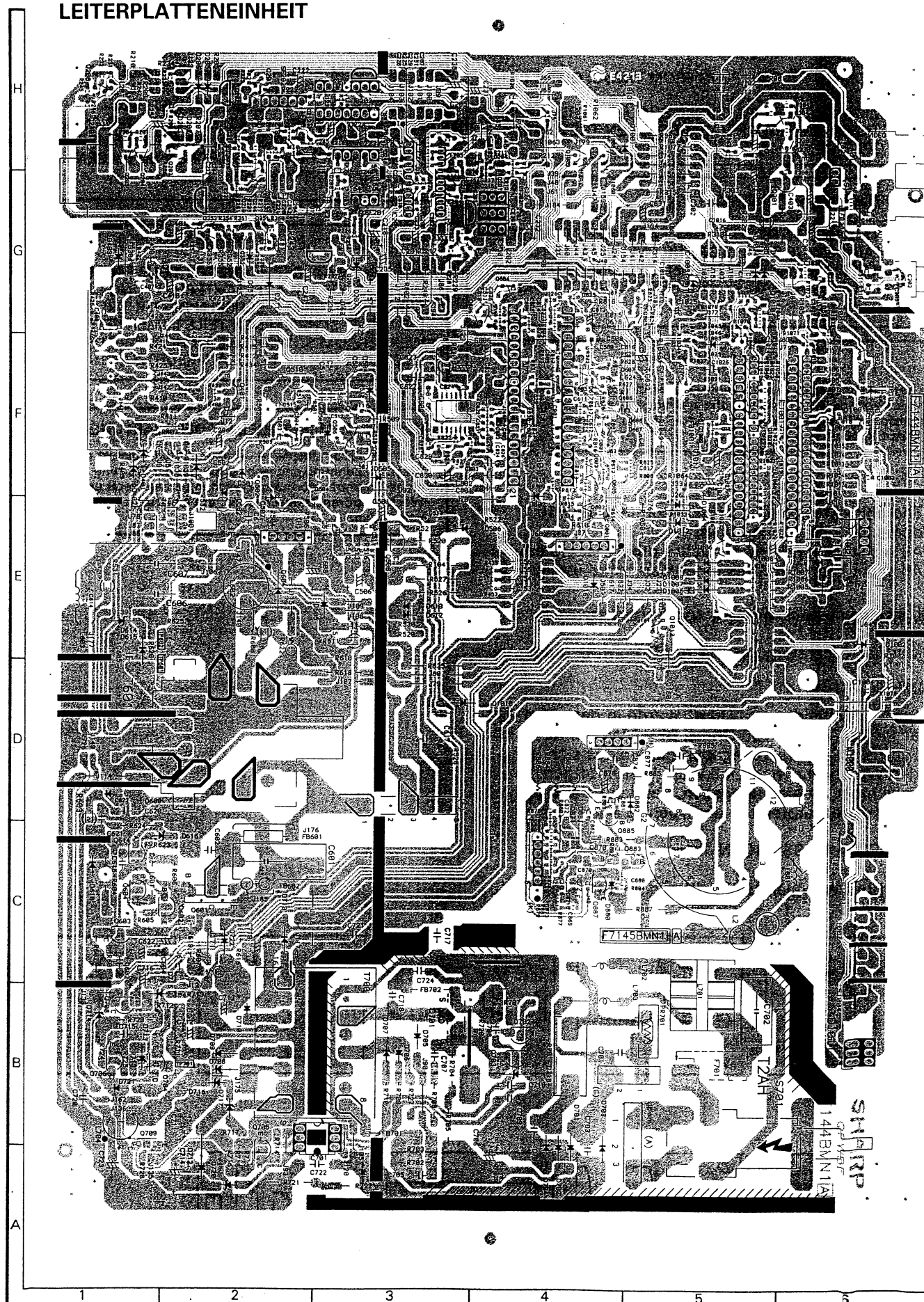
MIT "△" () BEZEICHNETEN TEILE SIND BESONDERS WICHTIG FÜR DIE AUFRECHTERHALTUNG DER SICHERHEIT. BEIM WECHSELN DIESER TEILE SOLLTEN DIE VORGESCHRIEBENEN TEILE IMMER VERWENDET WERDEN, UM SOWOHL DIE SICHERHEIT ALS AUCH DIE LEISTUNG DES GERÄTES AUFRECHTZUERHALTEN.

VORSICHTSMASSREGEL BEI DER WARTUNG:

Daß mit dieser Linie (---) eingefasste Gebiet ist direkt an der Wechselspannung angeschlossen. Bei der Wartung des Gebietes einen Trenntransformator zwischen Fernsehgerät und Wechselstromnetz anschließen, um elektrische Schläge zu vermeiden.

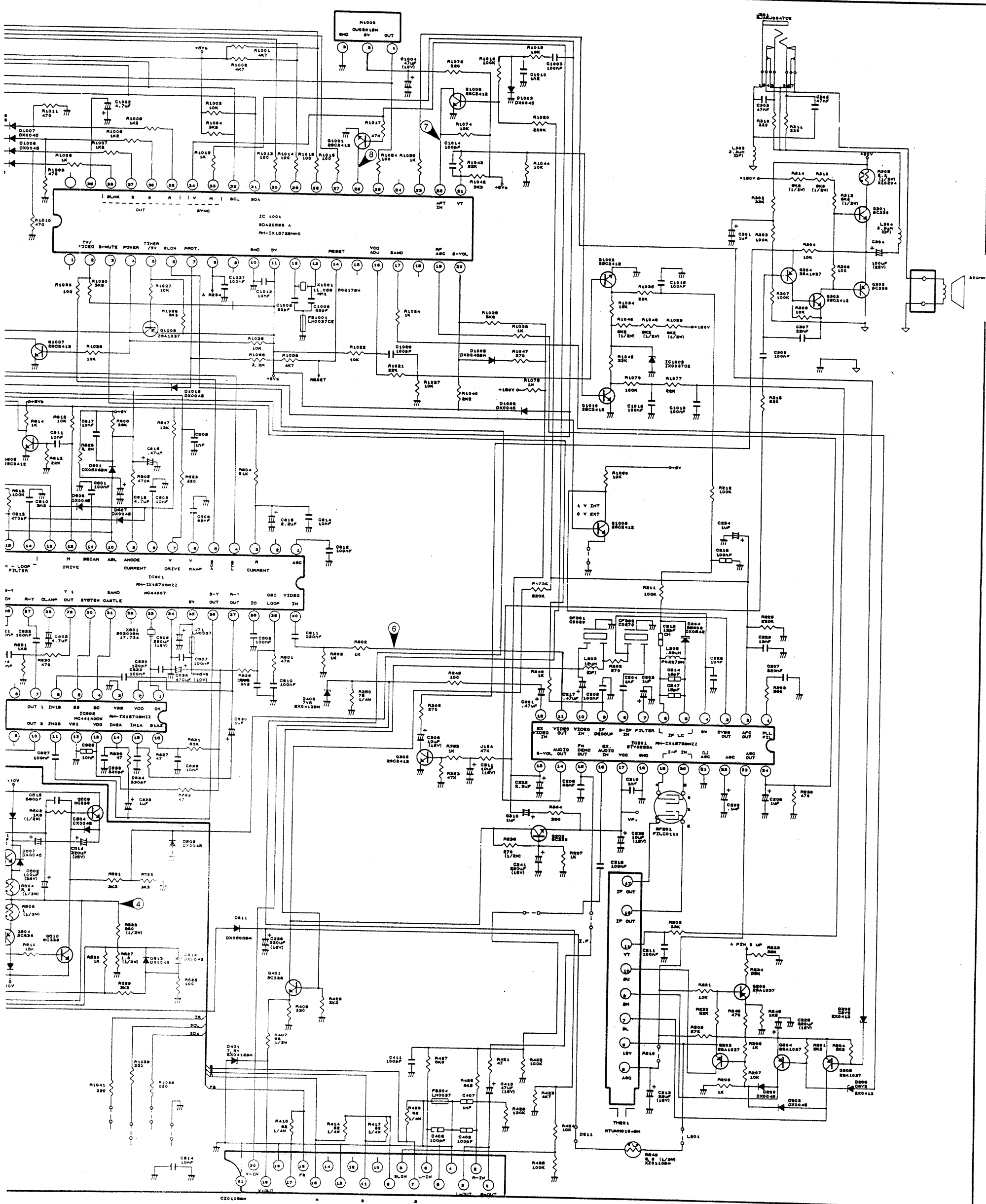
37AM-23S
37AM-24S

PRINTED WIRING BOARD LEITERPLATTENEINHEIT



37AM-23S
37AM-24S

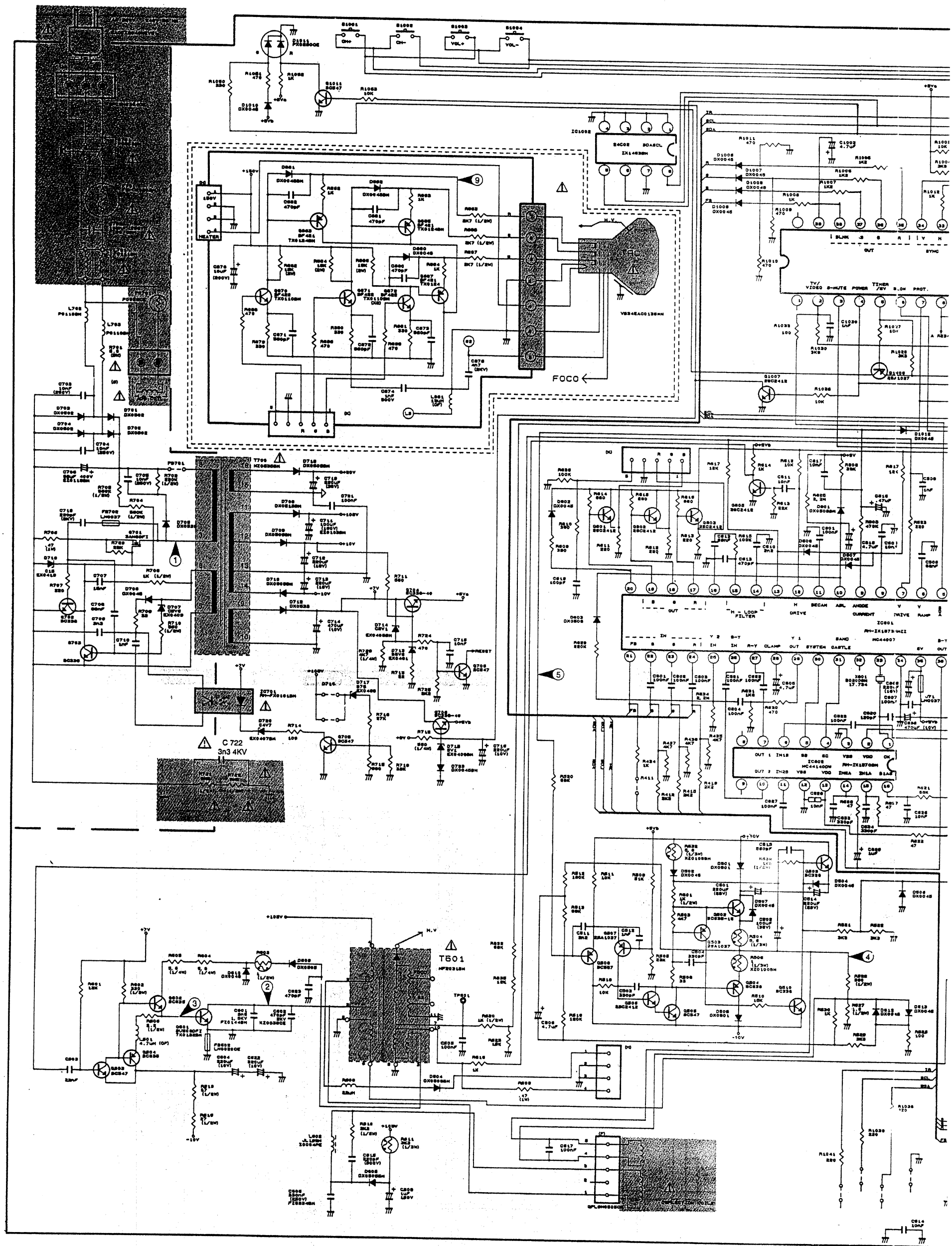
37AM-23S
37AM-24S



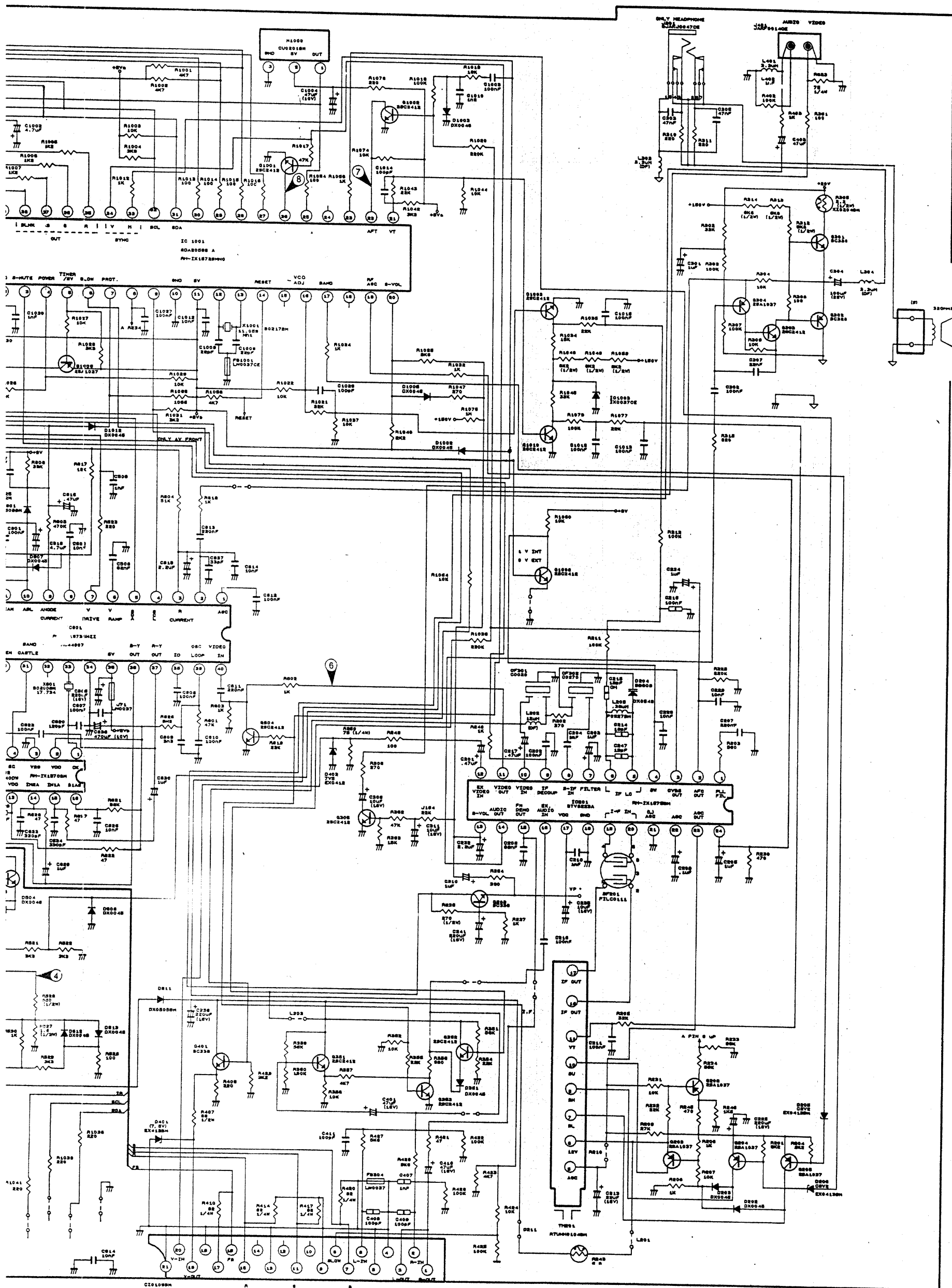
SCHEMATIC DIAGRAM SCHEMATISCHER SCHALTPLAN (37AM-24S)

37AM-23S
37AM-24S

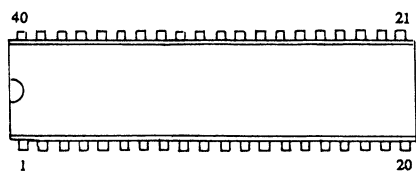
37AM
37AM



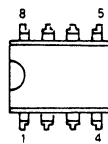
37AM-23S 37AM-24S



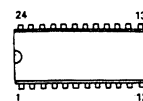
SOLID STATE DEVICE BASE DIAGRAM GRUNDDIAGRAM DER INTEGRIERTEN SCHALTKREISE



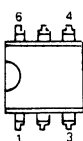
RH-IX1572BMZZ
RH-IX1573BMZZ



CH-IX1463CJSL
CH-IX1463CJSP



RH-IX1575BMZZ



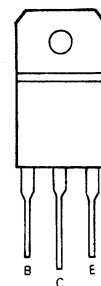
RH-FX0101BMZZ



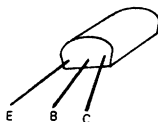
RH-IX0037CEZZ



RH-IX1570BMZZ
(SMD COMPONENT)



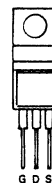
RH-TX0132BMZZ



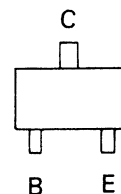
RH-TX0102BMZZ
RH-TX0104BMZZ
RH-TX0105BMZZ
RH-TX0106BMZZ
RH-TX0130BMZZ



RH-TX0108BMZZ
RH-TX0110BMZZ
RH-TX0112BMZZ
RH-TX0118BMZZ
RH-TX0124BMZZ
RH-TX0131BMZZ



RH-TX0128BMZZ

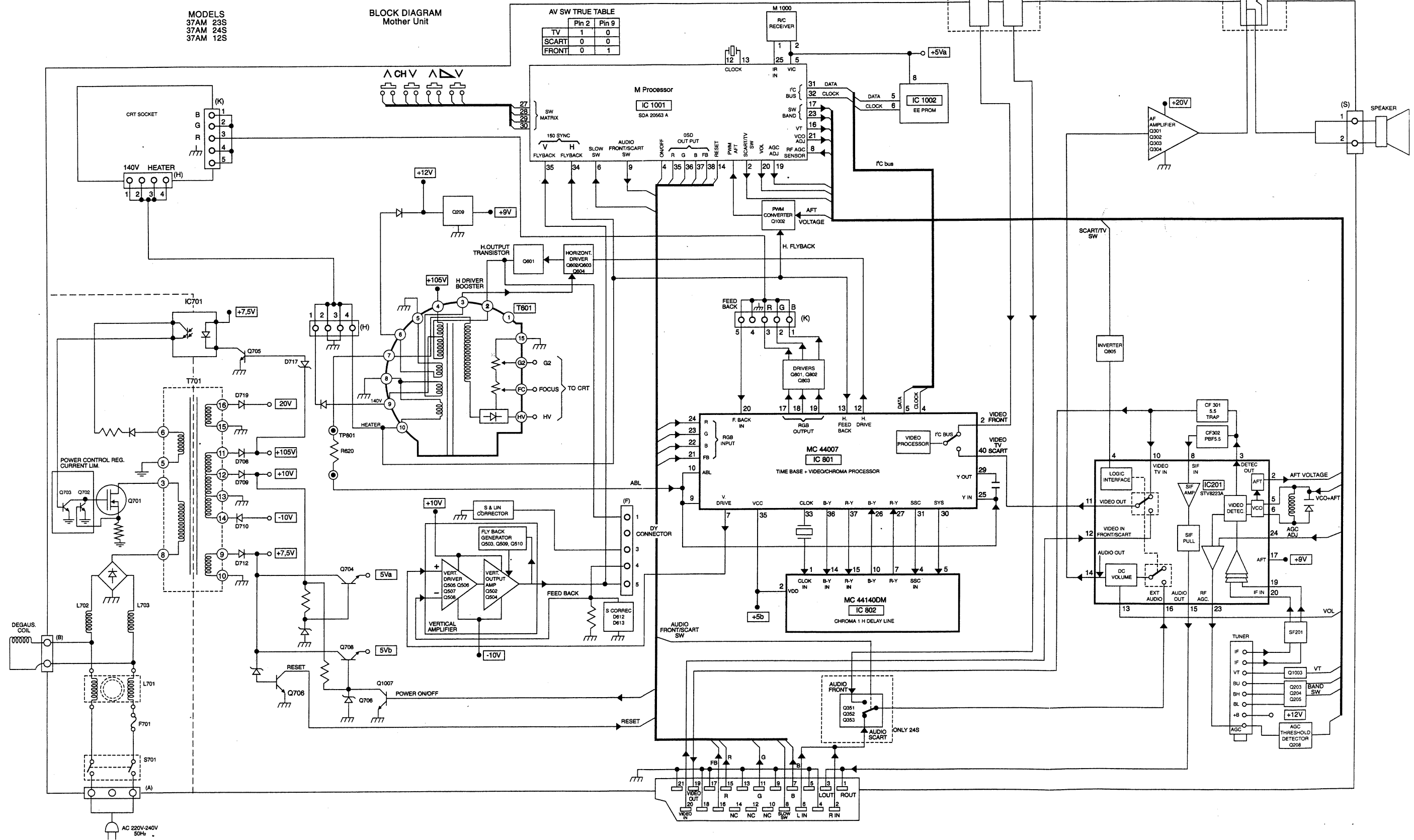


VS2SA1037KQ-1
VS2SC2412KQ-1
(SMD COMPONENT)

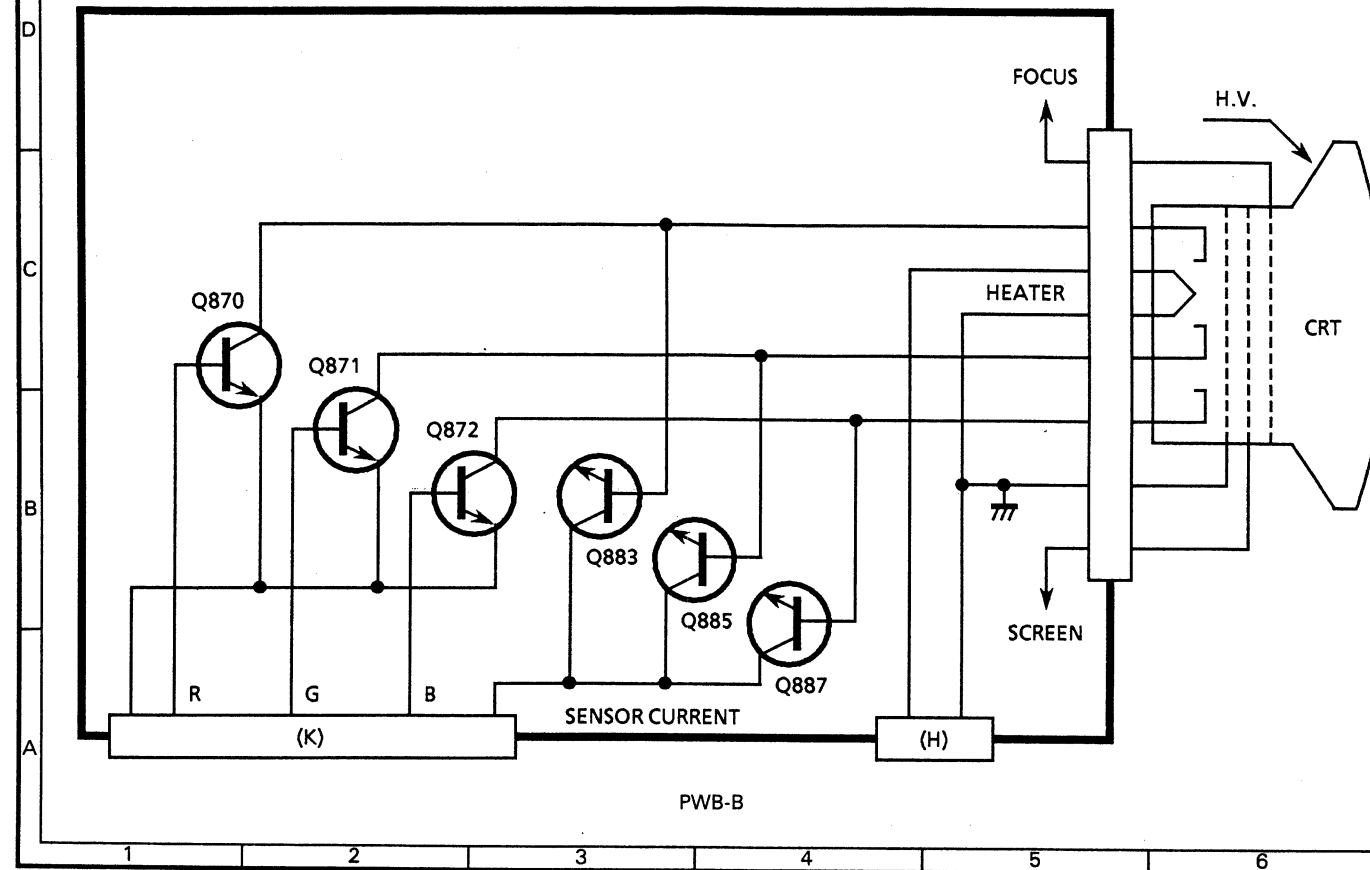
37AM-23S
37AM-24S

MODELS
37AM 23S
37AM 24S
37AM 12S

	Pin 2	Pin 9
TV	1	0
SCART	0	0
FRONT	0	1



PWB-A

BLOCK DIAGRAM
BLOCKSCHALTPLAN

PARTS LIST

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by Δ in the Replacement Parts list. The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted. Replacement parts not shown in this service manual may create shock, fire or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

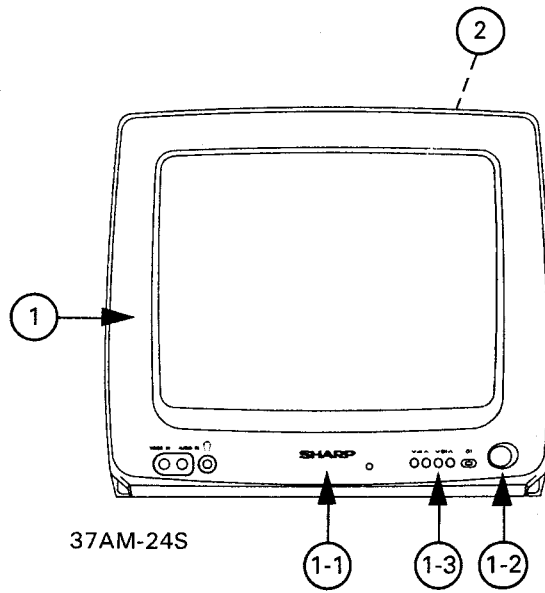
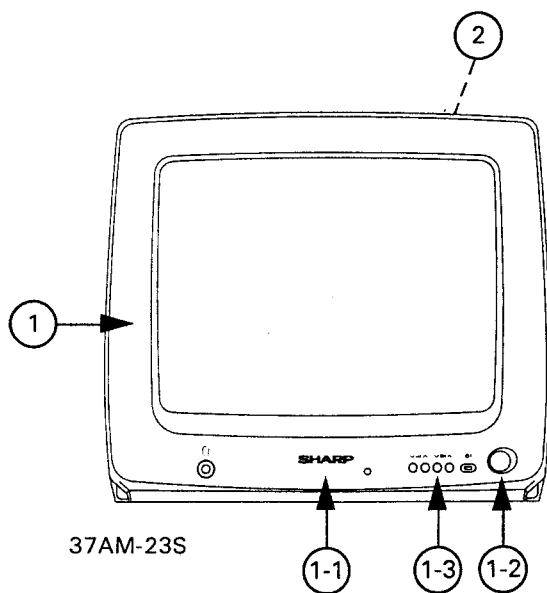
CODE EX: EUROPEAN MARKET
CODE SP: SPANISH MARKET
★ MARK: SPARE PARTS DELIVERY SECTION

REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP
PICTURE TUBE					
Δ	VB34EAC0136*N	S	CRT 14"	CD	BS
Δ	RCILG0407BMZZ	S	Degaussing Coil	AK	AE
IC 0201	RH-IX1575BMZZ	S	STV8223A	AQ	AH
Δ IC 0701	RH-FX0101BMZZ	S	Opto Coupler	AE	AC
IC 0801	RH-IX1573BMZZ	S	MC 44007	BA	AT
IC 0802	RH-IX1570BMZZ	S	MC 44140DW	AP	AG
IC 1001	RH-IX1572BMN0	S	SDA20561	AX	AP
IC 1002	CH-IX1463CJSL	S	NVM (37AM-23S)	AL	AE
	CH-IX1463CJSP	S	NVM (37AM-24S)	AL	AF
IC 1003	RH-IX0037CEZZ	S	UPC574J33V	AD	AF

REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP	REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP
TRANSISTORS						D 0501	RH-DX0501BMZZ	S	1N4004	AA	AA
Q 0203, 0204, 0205, 0208	VS2SA1037KQ-1	J	2SA1037	AA	AA	D 0502, 0504	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0209, 0301	RH-TX0102BMZZ	S	BC 338	AB	AA	D 0505	RH-DX0501BMZZ	S	1N4004	AA	AA
Q 0302	RH-TX0105BMZZ	S	BC 328	AB	AA	D 0506, 0507	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0303	VS2SC2412KQ-1	J	2SC2412	AA	AA	D 0604	RH-DX0506BMZZ	S	1N4936	AB	AB
Q 0304	VS2SA1037KQ-1	J	2SA1037	AA	AA	D 0605	RH-DX0505BMZZ	S	1N4935	AB	AB
Q 0305, 0351, 0352, 0353	VS2SC2412KQ-1	J	2SC2412 (37AM-24S)	AA	AA	D 0607, 0608	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0401	RH-TX0102BMZZ	S	BC 338	AB	AA	D 0609	RH-DX0505BMZZ	S	1N4935	AB	AB
Q 0502	RH-TX0118BMZZ	S	BC 635 $\beta > 100$	AC	AC	D 0610	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0503	VS2SA1037KQ-1	J	2SA1037	AA	AA	D 0611	RH-DX0505BMZZ	S	1N4935	AB	AB
Q 0504	RH-TX0131BMZZ	S	BC 638	AC	AB	D 0612, 0613	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0505	RH-TX0106BMZZ	S	BC 547	AB	AA	D 0701, 0702	RH-DX0502BMZZ	S	1N4005	AA	AB
Q 0506	VS2SC2412KQ-1	J	2SC2412	AA	AA	0703, 0704					
Q 0507	VS2SA1037KQ-1	J	2SA1037	AA	AA	D 0705	RH-DX0539BMZZ	S	BYT52M	AC	AA
Q 0508	RH-TX0104BMZZ	S	BC 557	AA	AA	D 0706	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 0509, 0510	RH-TX0102BMZZ	S	BC 338	AB	AA	D 0707	RH-EX0409BMZZ	S	BZX79C5V6	AA	AA
Q 0601	RH-TX0132BMZZ	S	BU508DFI	AM	AF	D 0708	RH-DX0515BMZZ	S	1N4937	AB	AA
Q 0602	RH-TX0108BMZZ	S	BC 635	AC	AA	D 0709, 0710	RH-DX0505BMZZ	S	1N4935	AB	AB
Q 0603	RH-TX0106BMZZ	S	BC 547	AB	AA	D 0712	RH-DX0533BMZZ	S	1N5819	AD	AB
Q 0604	RH-TX0112BMZZ	S	BC 636	AB	AA	D 0713	RH-EX0481BMZZ	S	BZX79B5V6-2%	AB	AA
Q 0605	VS2SC2412KQ-1	J	2SC2412	AA	AA	D 0714, 0715	RH-EX0408BMZZ	S	BZX79C5V1	AB	AB
Q 0701	RH-TX0128BMZZ	S	STP3NA80FI	AM	AF	D 0717	RH-EX0495BMZZ	S	BZX79-75V-2%	AB	AA
Q 0702, 0703	RH-TX0102BMZZ	S	BC 338	AB	AA	D 0718	RH-EX0419BMZZ	S	BZX79C15V	AB	AA
Q 0704	RH-TX0130BMZZ	S	BC 338-40	AB	AA	D 0719	RH-DX0505BMZZ	S	1N4935	AB	AB
Q 0705, 0706	RH-TX0106BMZZ	S	BC 547	AB	AA	D 0720	RH-EX0407BMZZ	S	BZX79C4V7	AA	AA
Q 0708	RH-TX0130BMZZ	S	BC 338-40	AB	AA	D 0801	RH-DX0508BMZZ	S	Diode SMD	AB	AA
Q 0801, 0802, 0803, 0804, 0805, 1001, 1002, 1003	VS2SC2412KQ-1	J	2SC2412 (37AM-24S)	AA	AA	D 0802	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 1006	VS2SA1037KQ-1	J	2SA1037	AA	AA	D 0803	RH-DX0508BMZZ	S	Diode SMD	AB	AA
Q 1007, 1008, 1010	VS2SC2412KQ-1	J	2SC2412	AA	AA	D 1002, 1003, 1005, 1006, 1007, 1008, 1009, 1010	RH-DX0045BMZZ	S	1N4148	AA	AA
Q 1011	RH-TX0106BMZZ	S	BC547	AB	AA	PACKAGED CIRCUIT					
						POR 0701	RMPTP0028CEZZ	J	PTC	AG	AC
						X 0801	RCRSB0200BMZZ	S	Crystal 17.734 MHz	AG	AD
						X 1001	RCRSB0217BMZZ	S	Crystal 11.0592 MHz	AH	AE
						COILS					
D 0202, 0203	RH-DX0045BMZZ	S	1N4148	AA	AA	FB 1001	VP-DFR33M0000	S	3.3 μ H	AB	AA
D 0204	RH-DX0542BMZZ	S	BB 809	AD	AB	L 0202	VP-DF120K0000	J	12 μ H	AB	AB
D 0205, 0206	RH-EX0413BMZZ	S	BZX79C8V2	AB	AB	L 0205	RCILP0227BMZZ	S	390 μ H	AE	AC
D 0351	RH-DX0045BMZZ	S	1N4148 (37AM-24S)	AA	AA	L 0303, 0304, 0401	VP-DF3R3K0000	S	3.3 μ H	AB	AB
D 0401, 0402	RH-EX0412BMZZ	S	BZX79C7V5	AB	AA	L 0601	VP-CF4R7K0000	S	(37AM-24S) 4.7 μ H	AB	AA
						L 0602	RCILZ0004PEZZ	J	Delay Line	AN	AF
						Δ L 0701	RCILF0111BMZZ	S	Mains Filter	AL	AE
						L 0702, 0703	RCILP0110CEZZ	S	Coil	AE	AC
						R 0608	VP-DF220K000	J	22 μ H	AB	AB

REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP	REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP
CERAMIC FILTER						RESISTORS					
CF 0301	RFILC0020CEZZ	S	5.5 MHz	AE	AE	R 0243	RR-XZ0110BMZZ	S	6.8 1/3 W Fuse Resistor	AB	AA
CF 0302	RFILC0270CEZZ	S	Filter	AE	AC	R 0305	RR-XZ0204BMZZ	S	2.2 1/2 W Fuse Resistor	AB	AA
SF 0201	RFILC0111BMZZ	S	G1968M	AM	AF	R 0504	RR-XZ0109BMZZ	S	5.6 1/3 W Fuse Resistor	AB	AA
TRANSFORMERS						R 0506	RR-XZ0100BMZZ	S	1 1/3 W Fuse Resistor	AB	AA
Δ T0601	RTRNF2031BMZZ	S	F.B.T.	BA	AT	R 0532	RR-XZ0109BMZZ	S	5.6 1/3 W Fuse Resistor	AB	AA
Δ T0700	RTRNZ0535BMZZ	S	CHOPPER	AR	AK	R 0603	RR-XZ0200BMZZ	S	1 1/2 W Fuse Resistor	AB	AA
CAPACITORS						R 0609	VRN-VV3ABR47J	J	0.47 1 W Metal Film	AA	AA
C 0218	RC-FZ9104BMNJ	S	0.1 63 V Mylar	AB	AA	R 0611	RR-XZ0142BMZZ	S	3.3K 1/3 W Fuse Resistor	AB	AA
C 0225	VCEAGA1CW227M	J	220 16V Electrolytic	AC	AC	R 0701	VRW-KX3HC5R6K	S	5.6 5 W Cement	AD	AB
C 0236, 0241	VCEAGA1CW227M	J	220 16V Electrolytic	AC	AC	R 0706	VRN-VV3ABR47J	J	0.47 1 W Metal Film	AA	AA
C 0302	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA	Δ R 0721, Δ 0722	VRC-U2AHG825K	J	8.2M 1/2 W Solid	AA	AA
C 0304	VCEAGA1EW107M	S	100 25V Electrolytic	AB	AA	MISCELLANEOUS PARTS					
C 0501	VCEAGA1EW227M	S	220 25V Electrolytic	AB	AA	Δ F 0701	QFS-C2050BMZZ	S	Fuse 250V 2A	AD	AB
C 0502	VCEAGA1VW107M	J	100 35V Electrolytic	AC	AA	F 0702	QFSHD1009CEZZ	J	Fuse Holder	AA	AA
C 0508	RC-FZ9823BMNJ	S	0.082 63V Mylar	AB	AA	F 0703	QFSHD1010CEZZ	S	Fuse Holder	AB	AA
C 0514	VCEAGA1EW227M	S	220 25V Electrolytic	AB	AA	FB 0304	RBLN-0037CEZZ	J	Ferrite Bead	AB	AB
C 0601	RC-FZ0135BMZZ	S	6800p 1.5KV Mylar	AE	AE	FB 0602	RBLN-0020CEZZ	S	Ferrite Bead	AB	AA
C 0602	RC-KZ0038CEZZ	J	470p 2KV Ceramic	AB	AB	FB 0702	RBLN-0037CEZZ	J	Ferrite Bead	AB	AB
C 0603	RC-FZ9223BMNJ	S	0.022 63V Mylar	AB	AA	J 0401	QJAKF0014CEZZ	S	A/V Connector (37AM-24S)	AF	AC
C 0604	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA	M 1000	RRMCU0201BMZZ	S	Remote Control Receiver	AN	AG
C 0605	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA	Δ S 0701	QSW-P0600BMZZ	S	Power Switch	AL	AF
C 0606	RC-FZ6474BMNJ	S	0.47 250V Mylar	AE	AB	S 1001, 1002, 1003, 1004	QSW-K0079GEZZ	J	Push Button	AB	AB
C 0608	VCEAGA2CW105M	S	1 160V Electrolytic	AB	AA	(A)	QPLGN0304CEZZ	J	Connector	AB	AB
C 0615	VCKYPA2HB221K	S	220p 500V Ceramic	AB	AA	(F)	QPLGN0505CEZZ	J	Connector	AB	AB
C 0617	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA	(G)	QPLGN0207CEZZ	J	Connector	AA	AA
C 0622	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA	(S)	QPLGN0241CEZZ	J	Connector	AA	AA
Δ C 0702	RC-FZ0070BMZZ	S	0.1 250V Mylar	AD	AD		QSOCZ0106BMZZ	S	RGB Connector	AE	AC
C 0703, 0704, 0705	RC-KZ0029CEZZ	J	0.01 250V Ceramic	AC	AC		QJAKJ0047CEZZ	S	Headphones Connector	AG	AD
C 0706	RC-EZ0115BMZZ	S	68 400V Electrolytic	AM	AF	PWB-B CRT SOCKET UNIT					
C 0707	RC-FZ9153BMNJ	S	0.015 63V Mylar	AB	AA	TRANSISTORS					
C 0708	RC-FZ9683BMNJ	S	0.068 63V Mylar	AB	AA	Q 0870, 0871, 0872	RH-TX0110BMZZ	S	BF 422	AB	AA
C 0709	RC-FZ9332BMNJ	S	3300p 63V Mylar	AB	AA	Q 0883, 0885, 0887	RH-TX0124BMZZ	S	BF 421	AB	AA
C 0711	RC-EZ0103BMZZ	S	100 160V Electrolytic	AF	AD	DIODES					
C 0712, 0713	VCEAGA1CW227M	J	220 16V Electrolytic	AC	AC	D 0880, 0881, 0882	RH-DX0045BMZZ	S	1N4148	AA	AA
C 0714	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA	COILS					
C 0716	VCEAGA1AW227M	S	220 10V Electrolytic	AB	AA	L 0881	VP-CF120K0000	S	12 μH	AB	AB
C 0718	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC	AA						
C 0719	VCEAGA1VW227M	S	220 35V Electrolytic	AB	AA						
C 0721	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA						
Δ C 0722	RC-KZ0156CEZZ	S	3300p 4KV Ceramic	AD	AB						
C 0725	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC	AA						
C 0801, 0802, 0803	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA						
C 0806	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA						
C 0823, 0827	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	AA						
C 0838	VCEAGA1AW477M	S	470 10V Electrolytic	AB	AA						
C 1010	RC-FZ9122BMNJ	S	1200p 63V Mylar	AB	AA						
C 1013	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB	AA						
C 1026	VCCSPA1HL101J	J	100p 50V Ceramic	AA	AA						

REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP	REF. NO.	PART NO.	★	DESCRIPTION	CODE EX	CODE SP	
CAPACITORS						MISCELLANEOUS PARTS						
C 0874	VCKYPA2HB102K	J	1000p 500 V Ceramic	AA	AA	Δ	CACCZ2049WEV5	S	AC Cord	AR	AK	
C 0876	RC-KZ0023CEZZ	J	4700p 2 kV Ceramic	AD	AD		RRMCG1048BMSA	S	Infrared Remote Control Unit	AW	AN	
C 0878	VCEAAA2DW106M	J	10 200 V Electrolytic	AC	AC		VSP0080P-G5YB	J	Speaker	AL	AE	
RESISTORS					QANTR0081CEZZ		J	Antenna	AP	AP		
					TINS-6310BMN0		S	Operation Manual	AK	AE		
R 0882	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	AA	CABINETS PARTS						
R 0883	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	AA	1	CCABA1083BMV0	S	Front Cabinet Assembly 37AM-23S	BD	AW	
R 0884	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	AA		CCABA1089BMV0	S	Front Cabinet Assembly 37AM-24S	BD	AW	
R 0885	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	AA		1-1	HBDGB3505BMSA	S	Badge "SHARP"	AF	AC
R 0886	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	AA		1-2	JBTN-1023BMSA	S	Button Power	AB	AA
R 0887	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	AA		1-3	JBTN-1024BMSA	S	Buttons Channel/Volume	AD	AB
MISCELLANEOUS PARTS						2	GCABB1041BMKA	S	Rear Cabinet	AY	AR	
Δ	QSOCV1429BMZZ	S	CRT Socket	AH	AE							



SHARP

PRINTED IN SPAIN
IN SPANIEN GEDRUCKT

General Information

1995

Chassis: 5BSA

CRT: 34EAC0136

Also Covers:

Sharp 37AM-12H

Remote Control:

37AM-23H

RRMCG1048BMSA

37AM-12H

RRMCG1050BMSA

Main Power Button:

37AM-23H

JBTN-1023BMSA

37AM-12H

JBTN-1019BMSA

Specifications

Aerial Input Impedance	75 ohm unbalanced
Convergence	Self converging system
Focus	Bipotential electrostatic
Power Input	240V AC 50 Hz
Power Consumption	38 W
Speaker	8cm round
Voice Coil Impedance	32 ohm
Sweep Deflection	Magnetic
Tuning Ranges	471.25 MHz / 855.25 MHz
Audio Power Output Rating	1.5W (MPO)
Intermediate Frequencies:	
Picture IF	39.5 MHz
Sound IF Carrier	33.5 MHz
Colour Sub-Carrier	35.07 MHz (Nominal)

Service Adjustments

Important Service Notes

Maintenance and repair of this receiver should be done by qualified service personnel only.

Recommended Safety Parts

Item	Part No.	Description
	VB34EAC0136*N	CRT 14"
	RCILG0407BMZZ	Degaussing Coil
C 0722	RC-KZ0156CEZZ	3300p 4KV Ceramic
IC 0701	RH-FX0101BMZZ	Opto Coupler
L 0701	RCILF0111BMZZ	Mains Filter
R 0721	VRC-U2AHG825K	8.2M 1/2 W Solid
S 0701	QSW-P0600BMZZ	Power Switch
T 0601	RTRNF2031BMZZ	F.B.T.
T 0700	RTRNZ0535BMZZ	Chopper

Servicing of High Voltage and Picture Tube.

When servicing the high voltage system, remove static charge from it by connecting a 10 k Ω Resistor in series with an insulated wire (such as a test probe) between picture tube ground tag and high voltage lead (AC line cord should be disconnected from AC outlet).

- 1: Picture tube in this receiver employs integral implosion protection.
- 2: Replace with tube of the same type number for continued safety.
- 3: Do not lift picture tube by the neck.
- 4: Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-Ray

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range the following precautions should be observed:

- 1: When repairing the circuit, be sure not to increase the high voltage to more than 30.0 kv, (at beam 1000uA) for the set.
- 2: To keep the set in a normal operation, be sure to make it function on 23.5 kv $\pm$ 1.5 kv (at beam 1000 uA) in the case of the set. The set has been factory adjusted to the above-mentioned high voltage. If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
- 3: Do not substitute a picture tube with unauthorised types and/or brands which may cause excess X-Ray radiation.

Before Returning the Receiver

In addition to the checks necessary as a result of a repair having been carried out, the following additional safety checks should also be made before returning the units to the user.

- 1: Inspect all lead insulation to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
- 2: Inspect all protective devices such as non-metallic control knobs, insulating fish papers, cabinate backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.
- 3: Apply test voltage of 3000 volts between live parts and accessible metal parts for 3 seconds.

Service Adjustment

Service Mode Function

This mode function is provided to assist with the settings of those adjustments that may vary from one Picture Tube to another, or between models.

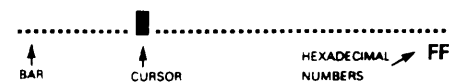
In order to use the Service Mode

- 1: Press main switch to OFF
- 2: Connect Test Pattern signal to antenna terminal
- 3: Press ∇ and CH Δ buttons and main switch to ON simultaneously.
- 4: —SERV— will appear on screen. Service mode is now entered.
- 5: Select adjustment using buttons ∇ CH Δ

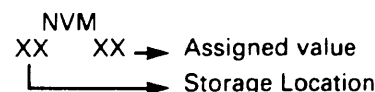
To exit service mode, press main switch to OFF or press MODE button on R/C.

	Displayed on Screen	Hexadecimal Range	Function
	SERV		Indicates operative Service Mode
a	AGC	00 - FF	Auto Gain Contr
b	AFT	00 - FF	Auto Frequency Contr
c	BL PHA	00 - 3F	Blanking Pulse shift
d	VER PO	00 - 3F	Vertical Position shift
e	VER AM	00 - 3F	Vertical Amplitude shift
f	VER SM	00 - 3F	Vertical Symmetry alteration
g	LUMA-D	00 - 05	Luma Delay
h	G II		Indication of G2 adjustment
i	V-B-CO	00 - 3F	Vertical Breathing Correction (DO NOT TOUCH)
j	GAIN R	00 - 3F	Red Gain
k	GAIN G	00 - 3F	Green Gain
l	GAIN B	00 - 3F	Blue Gain
m	NVM		Access to NVM memory

- 6: For "a" thru "l" selections. Adjustment to a selection can be made by pressing buttons ∇ Δ (not for GII adjustment). A colour bar is displayed on the OSD to indicate the adjustment position, together with hexadecimal numbers (not for GII adjustment).



For "m" selection.
NVM storage location settings variants.



In order to have access to the desired storage location, buttons ∇ Δ should be pressed, to obtain a higher or lower location, respectively. Bear in mind that, for storage location indication a hexadecimal numerical system is used, instead of a decimal system.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, ... 19, 1A, 1B, 1C, 1D, 1E, 1F, 20, 21, ... 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, ... B0, ... C0, ... D0, ... E0, ... F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF.

From this last location FF to the first 00 can be reached by increasing and from first to last by decreasing. Once the storage location to be varied has been selected, its value can be modified by the bits that form part of the storage location numerical buttons, numbers 0 to 7, respectively. This switches its binary number from and between 0 and 1 each time one of the buttons is pressed.

0 = 2⁰, 1 = 2¹, 2 = 2² = 4, ...

ACD	DESCRIPTION
00	RED COLOUR TEMPERATURE
01	GREEN COLOUR TEMPERATURE
02	BLUE COLOUR TEMPERATURE
03	VERTICAL POSITION
04	HORIZONTAL PHASE CONTROL
05	VERTICAL AMPLITUDE
06	VERTICAL BREATHING CORRECTION
07	VERTICAL LINEARITY
08	LUMA DELAY PAL
09	LUMA DELAY SECAM
0A	AGC
0B	OPTIONS
0C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
0D	AFT ADJUSTMENT VALUE (L SYSTEM)
0E	MAXIMUM VOLUME LIMIT
0F	FIRM
10	RED COLOUR TEMPERATURE
11	GREEN COLOUR TEMPERATURE
12	BLUE COLOUR TEMPERATURE
13	VERTICAL POSITION
14	HORIZONTAL PHASE CONTROL
15	VERTICAL AMPLITUDE
16	VERTICAL BREATHING CORRECTION
17	VERTICAL LINEARITY
18	LUMA DELAY PAL
19	LUMA DELAY SECAM
1A	AGC
1B	OPTIONS
1C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
1D	AFT ADJUSTMENT VALUE (L SYSTEMS)
1E	MAXIMUM VOLUME LIMIT
1F	FIRM
20	RED COLOUR TEMPERATURE
21	GREEN COLOUR TEMPERATURE
22	BLUE COLOUR TEMPERATURE
23	VERTICAL POSITION
24	HORIZONTAL PHASE CONTROL
25	VERTICAL AMPLITUDE
26	VERTICAL BREATHING CORRECTION
27	VERTICAL LINEARITY
28	LUMA DELAY PAL
29	LUMA DELAY SECAM
2A	AGC
2B	OPTIONS
2C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
2D	AFT ADJUSTMENT VALUE (L SYSTEMS)
2E	MAXIMUM VOLUME LIMIT
2F	FIRM
30	RED COLOUR TEMPERATURE
31	GREEN COLOUR TEMPERATURE
32	BLUE COLOUR TEMPERATURE
33	VERTICAL POSITION
34	HORIZONTAL PHASE CONTROL
35	VERTICAL AMPLITUDE
36	VERTICAL BREATHING CORRECTION
37	VERTICAL LINEARITY
38	LUMA DELAY PAL
39	LUMA DELAY SECAM
3A	AGC
3B	OPTIONS
3C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
3D	AFT ADJUSTMENT VALUE (L SYSTEMS)
3E	MAXIMUM VOLUME LIMIT
3F	FIRM
40	RED COLOUR TEMPERATURE
41	GREEN COLOUR TEMPERATURE
42	BLUE COLOUR TEMPERATURE
43	VERTICAL POSITION
44	HORIZONTAL PHASE CONTROL
45	VERTICAL AMPLITUDE
46	VERTICAL BREATHING CORRECTION
47	VERTICAL LINEARITY
48	LUMA DELAY PAL
49	LUMA DELAY SECAM
4A	AGC
4B	OPTIONS
4C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
4D	AFT ADJUSTMENT VALUE (L SYSTEMS)
4E	MAXIMUM VOLUME LIMIT
4F	FIRM
50	RED COLOUR TEMPERATURE
51	GREEN COLOUR TEMPERATURE
52	BLUE COLOUR TEMPERATURE
53	VERTICAL POSITION
54	HORIZONTAL PHASE CONTROL
55	VERTICAL AMPLITUDE
56	VERTICAL BREATHING CORRECTION
57	VERTICAL LINEARITY
58	LUMA DELAY PAL
59	LUMA DELAY SECAM
5A	AGC
5B	OPTIONS
5C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
5D	AFT ADJUSTMENT VALUE (L SYSTEMS)
5E	MAXIMUM VOLUME LIMIT
5F	FIRM
60	RED COLOUR TEMPERATURE
61	GREEN COLOUR TEMPERATURE
62	BLUE COLOUR TEMPERATURE
63	VERTICAL POSITION
64	HORIZONTAL PHASE CONTROL
65	VERTICAL AMPLITUDE
66	VERTICAL BREATHING CORRECTION
67	VERTICAL LINEARITY
68	LUMA DELAY PAL
69	LUMA DELAY SECAM
6A	AGC
6B	OPTIONS
6C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
6D	AFT ADJUSTMENT VALUE (L SYSTEMS)
6E	MAXIMUM VOLUME LIMIT
6F	FIRM
70	RED COLOUR TEMPERATURE
71	GREEN COLOUR TEMPERATURE
72	BLUE COLOUR TEMPERATURE
73	VERTICAL POSITION
74	HORIZONTAL PHASE CONTROL
75	VERTICAL AMPLITUDE
76	VERTICAL BREATHING CORRECTION
77	VERTICAL LINEARITY
78	LUMA DELAY PAL
79	LUMA DELAY SECAM
7A	AGC
7B	OPTIONS
7C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
7D	AFT ADJUSTMENT VALUE (L SYSTEMS)
7E	MAXIMUM VOLUME LIMIT
7F	FIRM
80	RED COLOUR TEMPERATURE
81	GREEN COLOUR TEMPERATURE
82	BLUE COLOUR TEMPERATURE
83	VERTICAL POSITION
84	HORIZONTAL PHASE CONTROL
85	VERTICAL AMPLITUDE
86	VERTICAL BREATHING CORRECTION
87	VERTICAL LINEARITY
88	LUMA DELAY PAL
89	LUMA DELAY SECAM
8A	AGC
8B	OPTIONS
8C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
8D	AFT ADJUSTMENT VALUE (L SYSTEMS)
8E	MAXIMUM VOLUME LIMIT
8F	FIRM
90	RED COLOUR TEMPERATURE
91	GREEN COLOUR TEMPERATURE
92	BLUE COLOUR TEMPERATURE
93	VERTICAL POSITION
94	HORIZONTAL PHASE CONTROL
95	VERTICAL AMPLITUDE
96	VERTICAL BREATHING CORRECTION
97	VERTICAL LINEARITY
98	LUMA DELAY PAL
99	LUMA DELAY SECAM
9A	AGC
9B	OPTIONS
9C	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
9D	AFT ADJUSTMENT VALUE (L SYSTEMS)
9E	MAXIMUM VOLUME LIMIT
9F	FIRM
A0	RED COLOUR TEMPERATURE
A1	GREEN COLOUR TEMPERATURE
A2	BLUE COLOUR TEMPERATURE
A3	VERTICAL POSITION
A4	HORIZONTAL PHASE CONTROL
A5	VERTICAL AMPLITUDE
A6	VERTICAL BREATHING CORRECTION
A7	VERTICAL LINEARITY
A8	LUMA DELAY PAL
A9	LUMA DELAY SECAM
AA	AGC
AB	OPTIONS
AC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
AD	AFT ADJUSTMENT VALUE (L SYSTEMS)
AE	MAXIMUM VOLUME LIMIT
AF	FIRM
B0	RED COLOUR TEMPERATURE
B1	GREEN COLOUR TEMPERATURE
B2	BLUE COLOUR TEMPERATURE
B3	VERTICAL POSITION
B4	HORIZONTAL PHASE CONTROL
B5	VERTICAL AMPLITUDE
B6	VERTICAL BREATHING CORRECTION
B7	VERTICAL LINEARITY
B8	LUMA DELAY PAL
B9	LUMA DELAY SECAM
BA	AGC
BB	OPTIONS
BC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
BD	AFT ADJUSTMENT VALUE (L SYSTEMS)
BE	MAXIMUM VOLUME LIMIT
BF	FIRM
C0	RED COLOUR TEMPERATURE
C1	GREEN COLOUR TEMPERATURE
C2	BLUE COLOUR TEMPERATURE
C3	VERTICAL POSITION
C4	HORIZONTAL PHASE CONTROL
C5	VERTICAL AMPLITUDE
C6	VERTICAL BREATHING CORRECTION
C7	VERTICAL LINEARITY
C8	LUMA DELAY PAL
C9	LUMA DELAY SECAM
CA	AGC
CB	OPTIONS
CC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
CD	AFT ADJUSTMENT VALUE (L SYSTEMS)
CE	MAXIMUM VOLUME LIMIT
CF	FIRM
D0	RED COLOUR TEMPERATURE
D1	GREEN COLOUR TEMPERATURE
D2	BLUE COLOUR TEMPERATURE
D3	VERTICAL POSITION
D4	HORIZONTAL PHASE CONTROL
D5	VERTICAL AMPLITUDE
D6	VERTICAL BREATHING CORRECTION
D7	VERTICAL LINEARITY
D8	LUMA DELAY PAL
D9	LUMA DELAY SECAM
DA	AGC
DB	OPTIONS
DC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
DD	AFT ADJUSTMENT VALUE (L SYSTEMS)
DE	MAXIMUM VOLUME LIMIT
DF	FIRM
E0	RED COLOUR TEMPERATURE
E1	GREEN COLOUR TEMPERATURE
E2	BLUE COLOUR TEMPERATURE
E3	VERTICAL POSITION
E4	HORIZONTAL PHASE CONTROL
E5	VERTICAL AMPLITUDE
E6	VERTICAL BREATHING CORRECTION
E7	VERTICAL LINEARITY
E8	LUMA DELAY PAL
E9	LUMA DELAY SECAM
EA	AGC
EB	OPTIONS
EC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
ED	AFT ADJUSTMENT VALUE (L SYSTEMS)
EE	MAXIMUM VOLUME LIMIT
EF	FIRM
F0	RED COLOUR TEMPERATURE
F1	GREEN COLOUR TEMPERATURE
F2	BLUE COLOUR TEMPERATURE
F3	VERTICAL POSITION
F4	HORIZONTAL PHASE CONTROL
F5	VERTICAL AMPLITUDE
F6	VERTICAL BREATHING CORRECTION
F7	VERTICAL LINEARITY
F8	LUMA DELAY PAL
F9	LUMA DELAY SECAM
FA	AGC
FB	OPTIONS
FC	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
FD	AFT ADJUSTMENT VALUE (L SYSTEMS)
FE	MAXIMUM VOLUME LIMIT
FF	FIRM

20	AFT ADJUSTMENT VALUE (B/G L SYSTEMS)
21	AFT ADJUSTMENT VALUE (L SYSTEMS)
22	MAXIMUM VOLUME LIMIT
23	FIRM
30	TABLE LONG
31	FIRM
32	AGING ON, AUTOMATIC SWITCH ON
33	SWITCH ON DELAY TIME
34	VOLUME
35	CONTRAST
36	COLOUR
37	BRIGHTNESS
38	PEAKING (RANGE 1-7)
39	ACTUAL PROGRAMME
3A	TV STATE ON/OFF
3B	DECIMAL VOLUME LEVEL (FACTORY PRESET)
3C	CONTRAST (FACTORY PRESET)
3D	COLOUR (FACTORY PRESET)
3E	BRIGHTNESS (FACTORY PRESET)
3F	PEAKING (RANGE 1-7) (FACTORY PRESET)
40	ON TIMER LAST VALUE
41	OFF TIMER LAST VALUE
42-B9	PROGRAMMES
BA (37AM-23H)	OSD STATE (X.X.X.X.X CHILD, FRONT, CHILD, AV, NORM ON/OFF)
BA (35AT-25H)	OSD STATE BIT 0: PICTURE NORM ON/OFF BIT 1: SCART/AV LOCKED BIT 2: FRONTAL LOCKED BIT 3: ROW 8-30 PERMISS (PROGRAMMED INTERNALLY) BIT 4: PIN NUMBER OPTION IC - NOT APPEAR, 1 - APPEAR BIT 5: CLOCK STATE (PROGRAMMED INTERNALLY) BIT 6: ELIMINATE VERTICAL WHITE BARS IN MENUS BIT 7: X
BB	BKCD USERS CORRECTION (NOT USED IN THIS MODEL)
BC	BKCD USERS PRESET VALUE (NORMALIZED)
BD	VOLTAGE LIMIT BETWEEN L-L SYSTEMS (MSB)
BE	VOLTAGE LIMIT BETWEEN L-L SYSTEMS (LSB)
BF (37AM-23H)	HORIZONTAL OSD OFFSET
BF (37AT-25H)	HORIZONTAL OSD OFFSET BIT 7: DIRECTION SIGN (0) INCREASE (1) DECREASE BIT 6: DON'T CARE BIT 5 - BIT 0: OFFSET VALUE
C0	PROG SEARCH SPEED (ALL BANDS) - HIGH NIBBLE COMPLEMENTED
C1	PROG SEARCH SPEED (UHF BAND) - HIGH NIBBLE COMPLEMENTED
C2	PROG SEARCH SPEED (VHL BAND) - HIGH NIBBLE COMPLEMENTED
C3	PROG SEARCH SPEED (VHH BAND) - HIGH NIBBLE COMPLEMENTED
C4	CHANNEL RANGE IN FACTORY AUTOINSTALL
C5	PASSWORD ON (1) OFF(0)
C6	PASSWORD FIRST DIGIT
C7	PASSWORD SECOND DIGIT
C8	PASSWORD THIRD DIGIT
C9	PASSWORD FOURTH DIGIT
CA-CF	FREE
DO-FF (37AM-23H)	FREE
DO-FF (37AT-25H)	LIST STORED PAGES (8 PROGRAMMES)/(6 BYTES PER PROGRAMME)

Service Adjustments Cont'd.

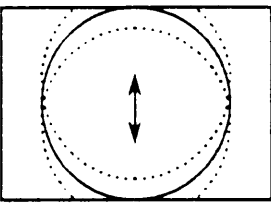


Fig 2

NITS. It may be necessary to repeat procedure.

Note:
Locations: GAIN R alter 'X' co-ordinate;
GAIN G alter the 'Y' co-ordinates; GAIN B alter the 'X' and 'Y' co-ordinates.

Child Lock Cancel

The following process describes how to cancel actual password (PIN) when the customer forgets the code.

- 1: Switch ON TV set.
- 2: Press buttons v Δ on TV and $\square$ / $\rightarrow$ on R/C simultaneously.
- 3: Press MODE button on R/C to input menu.
- 4: Using buttons Δ CH v move to $\rightarrow$ position.
- 5: Press MODE button again.
- 6: Select PIN and input new PIN (please do not forget it).
- 7: Select EXIT and press MODE button again.

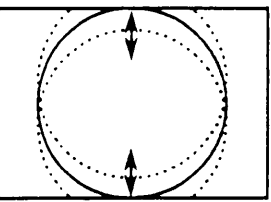


Fig 3.

4: "VER SM"

- 1: Receive Philips pattern signal.
- 2: When Δ button is pressed, upper picture scanning decreases and lower picture scanning increases.
- 3: When Δ button is pressed, upper picture scanning increases and lower picture scanning decreases.
- 4: Adjust the vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 4).

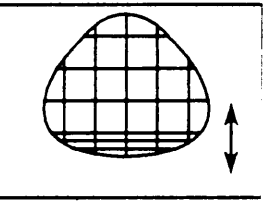


Fig 4.

Colour Adjustment

5: "LUMA D"

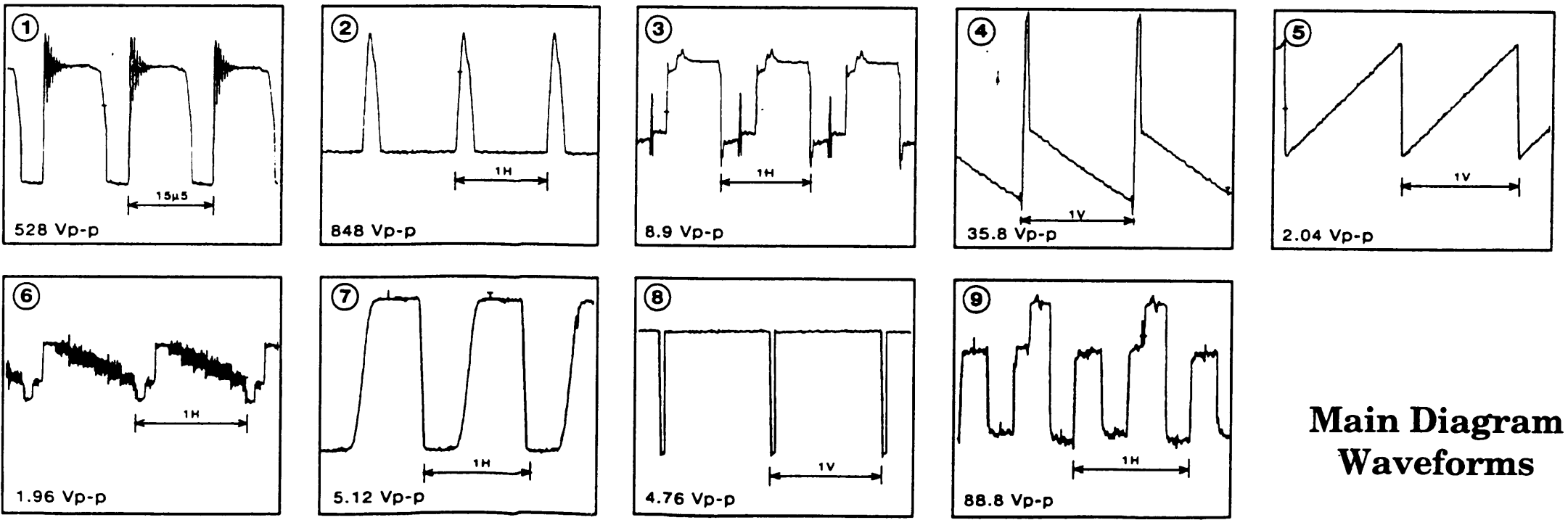
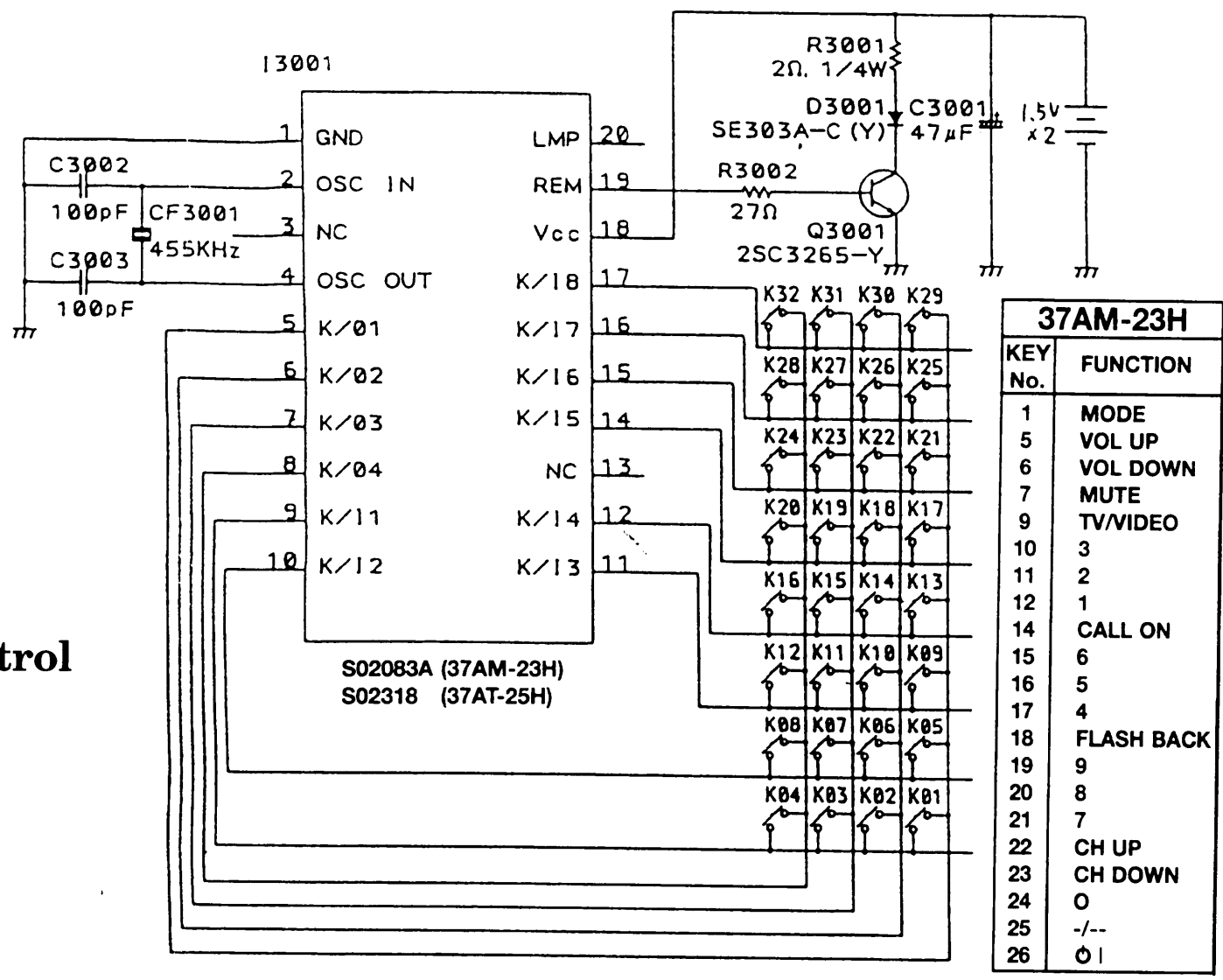
- 1: Receive Philips pattern signal.
- 2: When Δ button is pressed, luma phase delays.
- 3: When Δ button is pressed, chroma phase delays.
- 4: Adjust the chroma-luma delay.

The following adjustments are only required when the Picture Tube is changed.

6: "GAIN R", "GAIN G", "GAIN B".

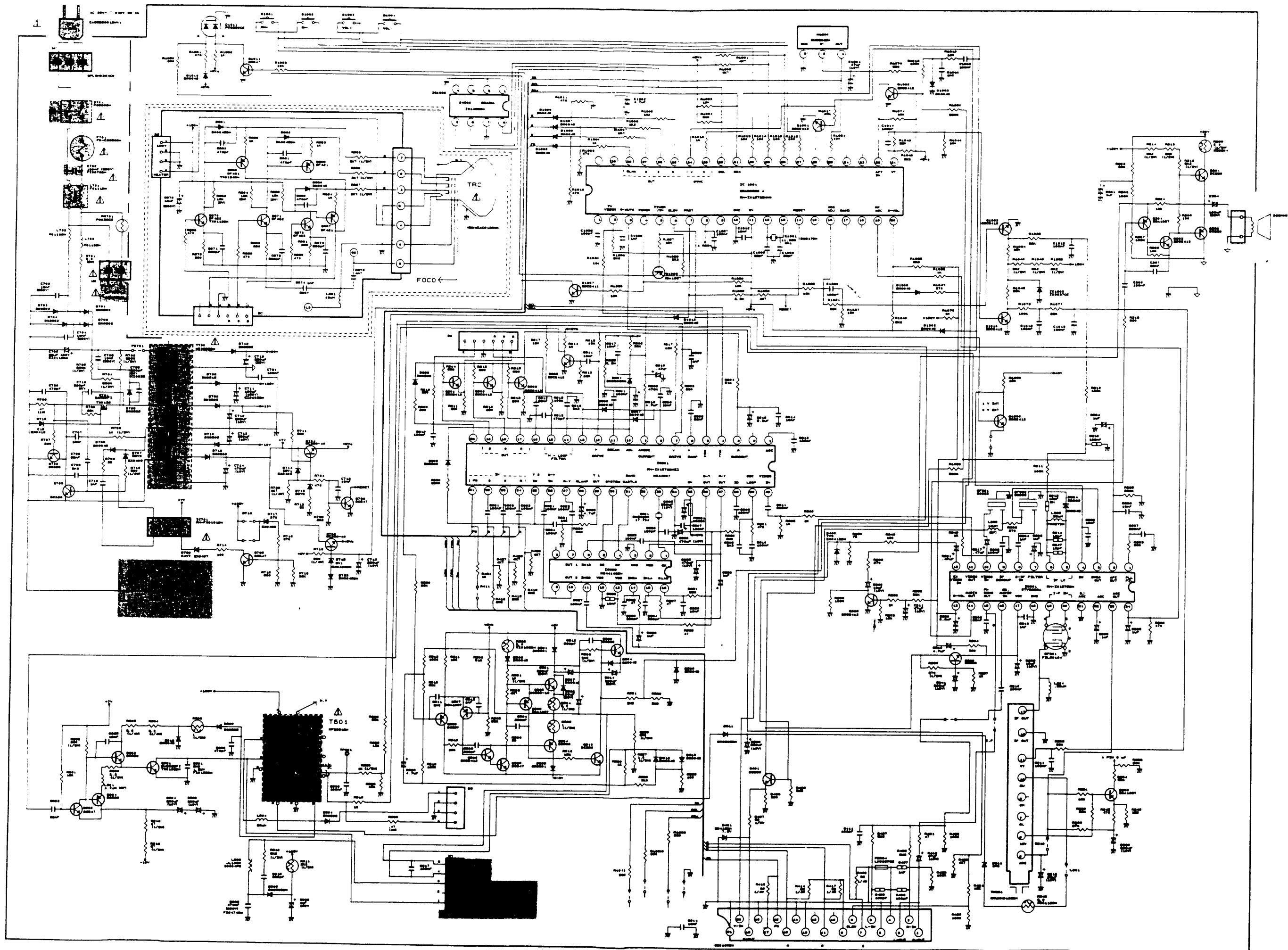
- 1: Adjust G2.
- 2: Tune in white card.
- 3: Adjust colour to minimum.
- 4: Position colourmetre in the centre of screen.
- 5: Using brightness and contrast buttons, select a luminance of ≈ 120 nits.
- 6: Operate again in Service Mode and select location GAIN R, GAIN G, GAIN B to obtain colour co-ordinates:
 $X = 0.290 \pm 0.015$
 $Y = 0.284 \pm 0.015$
- 7: Exit Service Mode and check colour co-ordinates 'X' and 'Y' at 20 and 120

Remote Control Diagram



Main Diagram Waveforms

Main
Diagram



SERVICE ADJUSTMENT

SERVICE MODE FUNCTION

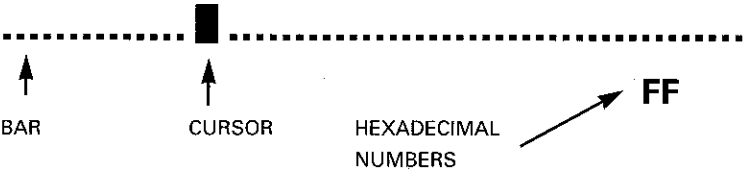
This mode function is provided to assist with the settings of those adjustments that may vary from one Picture Tube to another, or between models.

In order to use the Service Mode

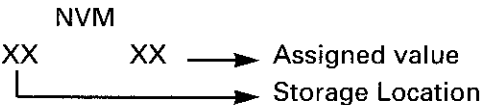
- 1. Press main switch to OFF.
 - 2. Connect Test Pattern signal to antenna terminal.
 - 3. Press ∇ $\triangleleft$ and CH $\triangleleft$ buttons and main switch to ON simultaneously.
 - 4. —SERV— will appear on screen. Service mode is now entered.
 - 5. Select adjustment using buttons $\triangleleft$ CH ∇ .
- To exit service mode, press main switch to OFF or press MODE button on R/C.

	Displayed on Screen	Hexadecimal Range	Function
a.	—SERV—		Indicates operative Service Mode.
b.	AGC	00 ~ FF	Auto Gain Control.
c.	AFT	00 ~ FF	Auto Frequency Control
d.	BL PHA	00 ~ 3F	Blanking Pulse shift.
e.	VER PO	00 ~ 3F	Vertical Position shift.
f.	VER AM	00 ~ 3F	Vertical Amplitude shift.
g.	VER SM	00 ~ 3F	Vertical Symmetry alteration.
h.	LUMA-D	00 ~ 05	Luma Delay
i.	GII		Indication of G2 adjustment.
j.	V-B-CO	00 ~ 3F	Vertical Breathing Correction (DON'T TOUCH).
k.	GAIN R	00 ~ 3F	Red Gain.
l.	GAIN G	00 ~ 3F	Green Gain.
m.	GAIN B	00 ~ 3F	Blue Gain.
n.	NVM		Access to NVM memory.

6. For "a" thru "l" selections.
Adjustment to a selection can be made by pressing buttons $\triangleleft$ $\triangleleft$ ∇ . (Not for GII adjustment).
A colour bar is displayed on the OSD to indicate the adjustment position, together with hexadecimal numbers (Not for GII adjustment).



For "m" Selection.
NVM storage location settings variants.



In order to have access to the desired storage location, buttons $\triangleleft$ $\triangleleft$ ∇ should be pressed, as required, to obtain a higher or lower location, respectively. Bear in mind that, for storage location indication a hexadecimal numerical system is used, instead of a decimal system.

0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F, 10, 11, ... 19, 1A, 1B, 1C, 1D, 1E, 1F, 20, 21, ... 99, 9A, 9B, 9C, 9D, 9E, 9F, A0, A1, ... B0, ... C0, ... D0, ... E0, ... F0, F1, F2, F3, F4, F5, F6, F7, F8, F9, FA, FB, FC, FD, FE, FF.

From the last location FF to the first 00 can be reached by increasing and from first to last by decreasing. Once the storage location to be varied has been selected, its value can be modified by the bits that form part of the storage location numerical buttons, numbers $\boxed{0}$ to $\boxed{7}$, respectively. This switches its binary number from and between 0 and 1 each time one of the buttons is pressed.

$\boxed{0} = 2^0 = 1, \quad \boxed{1} = 2^1 = 2, \quad \boxed{2} = 2^2 = 4, \dots$

■ PIF / AGC Adjustment

1. VCO + AFT Adjustment

1. Connect the output of SSG (Standard Signal Generator) to the tuner IF output terminal.
 - SSG output: 39.5 MHz (CW) ± 5 kHz).
 - SSG output level: approx. 90 dBuV.
2. Enter into Service Mode.
3. Push CH $\wedge$ until AFT appears.
4. Press $\square$ / $\text{O} \rightarrow$ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again, setting is now memorized.

2. RF-AGC Take over Adjustment (I2C BUS)

1. Receive the "COLOUR BAR" signal (Channel E-42).
 - Signal strength: 57 dBuV.
2. Enter into Service Mode.
3. Push CH $\wedge$ until AGC appears.
4. Press $\square$ / $\text{O} \rightarrow$ button on R/C. Setting is made automatically. During this setting the colour bar shall go from red to yellow. When setting is finished, colour bar disappears and B-STOP (bus stop) is shown on screen.
5. Switch set OFF and ON again. Setting is now memorized.

■ Screen Adjustment

3. Focus Adjustment

1. Apply mains voltage of 240 V AC/50 Hz to TV.
2. Receive Philips pattern signal to a level between 60 and 80 dBuV.
3. Set contrast to 10/10, brightness to 5/10 and colour 0/10.
4. Adjust focus potentiometer to obtain maximum definition.

4. G2 Adjustment

1. Apply mains voltage of 240 V AC/50 Hz to TV.
2. Receive black screen signal to a level between 60 and 80 dBuV.
3. Set contrast to 10/10, brightness to 0/10 and colour 0/10.
4. Enter into Service Mode.
5. Push CH $\wedge$ until GII appears.
6. Increase G2 potentiometer until flyback appears on screen, and OSD bar is at maximum.
7. Adjust G2 potentiometer until OSD bar is at half way position on screen.
8. Exit Service Mode.

GEOMETRY ADJUSTMENT PROCEDURE

1. "BL PHA".

- Receive Philips pattern signal.
- When $\triangle \wedge$ button is pressed, picture moves to the left.
- When $\triangle \vee$ button is pressed, picture moves to the right.
- Adjust the horizontal location to obtain picture centering (fig. 1).

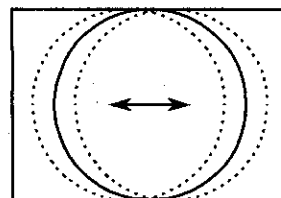


Fig. 1

2. "VER PO".

- Receive Philips pattern signal.
- When $\triangle \wedge$ button is pressed, picture moves up.
- When $\triangle \vee$ button is pressed, picture moves down.
- Adjust the horizontal location to obtain picture centering (fig. 2).

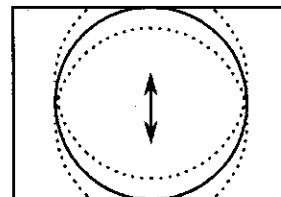


Fig. 2

3. "VER AM".

- Receive Philips pattern signal.
- When $\triangle \wedge$ button is pressed, vertical size of picture increases.
- When $\triangle \vee$ button is pressed, vertical size of picture decreases.
- Adjust the vertical size to obtain overscan (fig. 3).

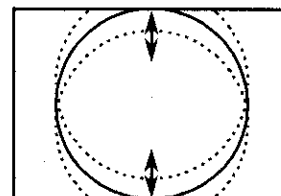


Fig. 3

4. "VER SM".

- Receive Philips pattern signal.
- When $\triangle \wedge$ button is pressed, upper picture scanning decreases and lower picture scanning increases.
- When $\triangle \vee$ button is pressed, upper picture scanning increases and lower picture scanning decreases.
- Adjust the vertical symmetry to obtain symmetrical scanning between upper and lower picture (fig. 4).

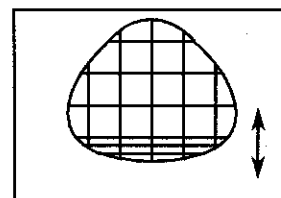


Fig. 4

COLOUR ADJUSTMENT

5. "LUMA D".

- Receive Philips pattern signal.
- When $\triangle \wedge$ button is pressed, luma phase delays.
- When $\triangle \vee$ button is pressed, chroma phase delays.
- Adjust the chroma-luma delay.

The following adjustments are only required when the Picture Tube is changed.

6. "GAIN R", "GAIN G", "GAIN B".

- Adjust G2.
- Tune in white card.
- Adjust colour to minimum.
- Position colourmeter in the center of screen.
- Using brightness and contrast buttons, select a luminance of ≈ 120 nits.
- Operate again in Service Mode and select location GAIN R, GAIN G, GAIN B to obtain colour coordinates:

$$X = 0.290 \pm 0.015$$

$$Y = 0.284 \pm 0.015$$

- Exit Service Mode and check colour coordinates 'X' and 'Y' at 20 and 120 NITS. It may be necessary to repeat procedure.

NOTE:

Locations: GAIN R alter 'X' coordinate; GAIN G alter the 'Y' coordinates; GAIN B alter the 'X' and 'Y' coordinates.

■ CHILD LOCK CANCEL

The following process describes how to cancel actual password (PIN) when the customer forgets code.

1. Switch ON TV set.
2. Press buttons   on TV and  /  on R/C simultaneously.
3. Press MODE button on R/C to input menu.
4. Using buttons  CH  move to  position.
5. Press MODE button again.
6. Select PIN and input new PIN (Please do not forget it)
7. Select EXIT and press MODE button again.

TELEVISION TECHNICAL BULLETIN

Page 1 of 1

<u>MODELS</u>	37AM23H	37AT25H	37AM12H
	51AT15H		

SYMPTOM The child lock mode cannot be released.

ACTION To reset the child lock mode, follow the procedure given below.

1. Switch the television on.
2. Press the volume down button on the television and the child lock button on the remote control simultaneously.
3. Press the mode button on the remote control.
4. Using the channel up and down buttons, move to the child lock position.
5. Press the mode button again.
6. Select a new PIN (Do not forget it).
7. Select exit and press mode again.

Note that this procedure is shown in the service manual.

TELEVISION TECHNICAL BULLETIN

<u>MODELS</u>	37AM12H	37AM23H	37AT25H	51AT15H
---------------	---------	---------	---------	---------

REASON How to set the reciever into the hotel mode

ACTION To set any of the above models into the hotel mode, follow the procedure outlined below.

To lock the tuning fuction change NVM location 0B as below.

Model	Tuning Locked	Tuning Unlocked
37AM12H	9C	98
37AM23H	BC	B8
37AT25H	BC	B8
51AT15H	BC	B8

To restrict the volume level, change the value of NVM location 0E.

Volume Level	Value
100%	FF
85%	DF
75%	BF
60%	9F
50%	7F
40%	5F

TELEVISION TECHNICAL BULLETIN

MODELS 37AM12H 37AM23H 37AT25H

SYMPTOM Q601 fails occasionally.

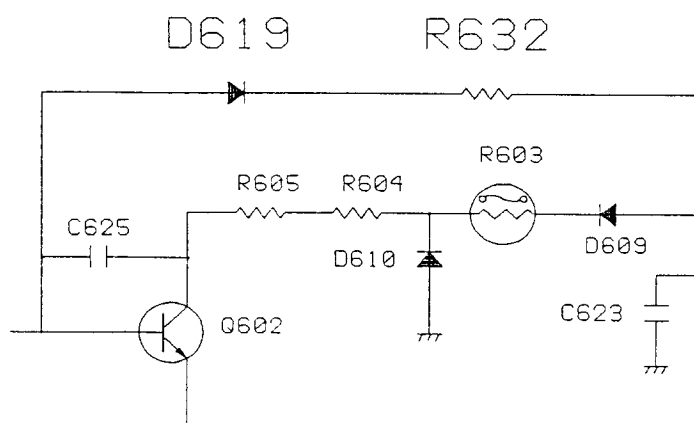
CAUSE Noise spikes on the drive signal to Q601.

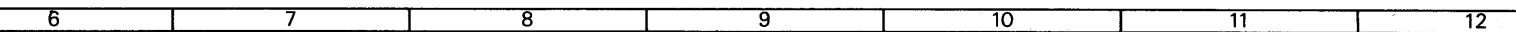
ACTION Fit D619 and R632 as shown in the diagram below, on the print side of the main PWB, ensuring that no component shorts out.

Also change C713 to 1000uF, 16V.

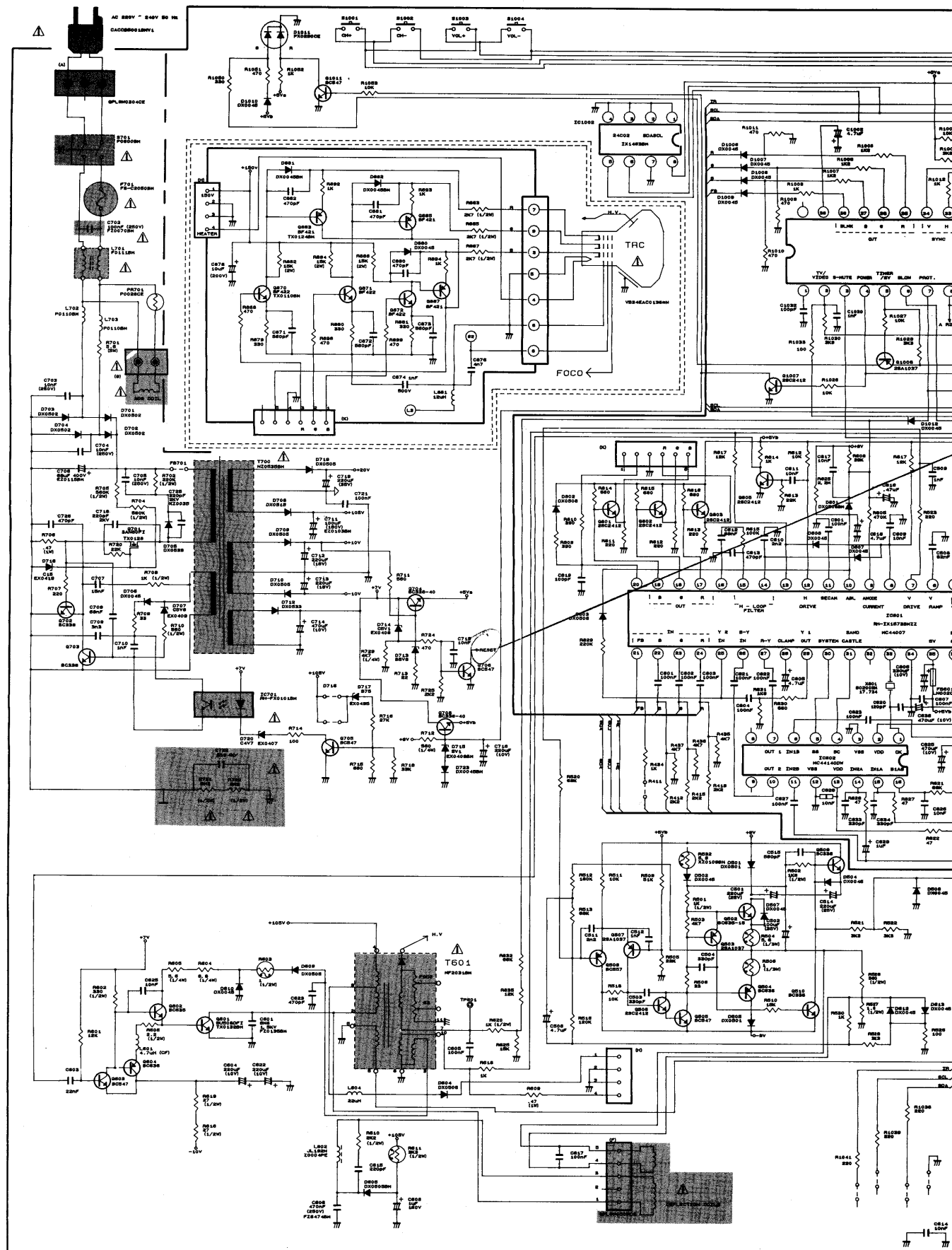
Use the part numbers given below.

<u>REF NO</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	<u>PRICE CODE</u>
D619	Diode	RH-DX0045BMZZ	AA
R632	Resistor 470R, 0.5W	VRD-RA2HD471J	AA
C713	Capacitor, 1000uF, 16V	VCEAGA1CW108M	AD





SCHEMATIC DIAGRAM (37AM-23H)



PARTS LIST

REPLACEMENT PARTS

Replacement parts which have special safety characteristics are identified in this manual. Electrical components having such features are identified by Δ in the Replacement Parts list. The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended is not permitted. Replacement parts not shown in this service manual may create shock, fire or other hazards.

HOW TO ORDER REPLACEMENT PARTS

To have your order completed promptly and correctly please supply the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |
| 5. CODE | 6. QUANTITY |

★ MARK: SPARE PARTS DELIVERY SECTION

REF. NO.	PART NO.	★	DESCRIPTION	CODE
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PICTURE TUBE

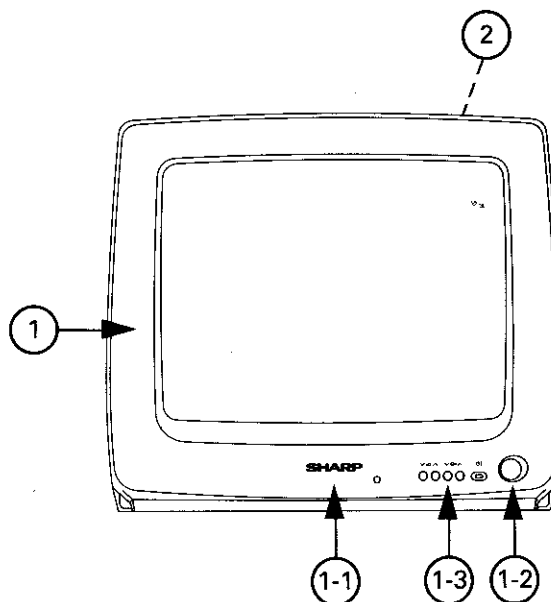
Δ	VB34EAC0136*N	S	CRT 14"	CD
Δ	RCILG0407BMZZ	S	Degaussing Coil	AK

REF. NO.	PART NO.	★	DESCRIPTION	CODE
PRINTED WIRING BOARD ASSEMBLIES				
PWB-A	DUNTK7144CJV3	-	Mother Unit 37AM-23H	-
PWB-A	DUNTK7144CJV4	-	Mother Unit 37AT-25H	-
PWB-B	DUNTK7145BMV3	-	CRT Socket Unit 37AM-23H	-
PWB-B	DUNTK7145BMV4	-	CRT Socket Unit 37AT-25H	-
PWB-A MOTHER UNIT				
TUNER				
NOTE: The parts shown here are supplied as an assembly but not separately.				
	RTUNH0103BMZZ	S	Hyperband Tuner	BF
INTEGRATED CIRCUITS				
IC 0201	RH-IX1575BMZZ	S	STV8223A	AQ
Δ IC 0701	RH-FX0101BMZZ	S	Opto Coupler	AE
IC 0801	RH-IX1573BMZZ	S	MC 44007	BA
IC 0802	RH-IX1570BMZZ	S	MC 44140DW	AP
IC 1001	RH-IX1572BMN0	S	SDA20563 (37AM-23H)	AX
	RH-IX1578BMN0	S	SDA 5254 (37AT-25H)	BG
IC 1002	CH-IX1463CJHA	S	NVM (37AM-23H)	AL
	CH-IX1463CJHB	S	NVM (37AT-25H)	AL
IC 1003	RH-IX0037CEZZ	S	UPC574J33V	AD

REF. NO.	PART NO.	★	DESCRIPTION	CODE	REF. NO.	PART NO.	★	DESCRIPTION	CODE
TRANSISTORS					D 0501	RH-DX0501BMZZ	S	1N4004	AA
Q 0208	VS2SA1037KQ-1	J	2SA1037	AA	D 0502,	RH-DX0045BMZZ	S	1N4148	AA
Q 0209,	RH-TX0102BMZZ	S	BC 338	AB	0504				
0301					D 0505	RH-DX0501BMZZ	S	1N4004	AA
Q 0302	RH-TX0105BMZZ	S	BC 328	AB	D 0506	RH-EX0408BMZZ	S	BZX79C5V1	AB
Q 0303	VS2SC2412KQ-1	J	2SC2412	AA	D 0507	RH-DX0045BMZZ	S	1N4148	AA
Q 0304	VS2SA1037KQ-1	J	2SA1037	AA	D 0604	RH-DX0506BMZZ	S	1N4936	AB
Q 0305	VS2SC2412KQ-1	J	2SC2412	AA	D 0605	RH-DX0505BMZZ	S	1N4935	AB
Q 0401	RH-TX0102BMZZ	S	BC 338	AB	D 0607,	RH-DX0045BMZZ	S	1N4148	AA
Q 0502	RH-TX0118BMZZ	S	BC 635 $\beta > 100$	AC	0608				
Q 0503	VS2SA1037KQ-1	J	2SA1037	AA	D 0609	RH-DX0505BMZZ	S	1N4935	AB
Q 0504	RH-TX0131BMZZ	S	BC 638	AC	D 0610	RH-DX0045BMZZ	S	1N4148	AA
Q 0505	RH-TX0106BMZZ	S	BC 547	AB	D 0611	RH-DX0505BMZZ	S	1N4935	AB
Q 0506	VS2SC2412KQ-1	J	2SC2412	AA	D 0612,	RH-DX0045BMZZ	S	1N4148	AA
Q 0507	VS2SA1037KQ-1	J	2SA1037	AA	0613				
Q 0508	RH-TX0104BMZZ	S	BC 557	AA	D 0701,	RH-DX0502BMZZ	S	1N4005	AA
Q 0509,	RH-TX0102BMZZ	S	BC 338	AB	0702,				
0510					0703,				
Q 0601	RH-TX0132BMZZ	S	BU508DFI	AM	0704				
Q 0602	RH-TX0108BMZZ	S	BC 635	AC	D 0705	RH-DX0539BMZZ	S	BYT52M	AC
Q 0603	RH-TX0106BMZZ	S	BC 547	AB	D 0706	RH-DX0045BMZZ	S	1N4148	AA
Q 0604	RH-TX0112BMZZ	S	BC 636	AB	D 0707	RH-EX0409BMZZ	S	BZX79C5V6	AA
Q 0605	VS2SC2412KQ-1	J	2SC2412	AA	D 0708	RH-DX0515BMZZ	S	1N4937	AB
Q 0701	RH-TX0128BMZZ	S	STP3NA80FI	AM	D 0709,	RH-DX0505BMZZ	S	1N4935	AB
Q 0702,	RH-TX0102BMZZ	S	BC 338	AB	0710				
0703					D 0712	RH-DX0533BMZZ	S	1N5819	AD
Q 0704	RH-TX0130BMZZ	S	BC 338-40	AB	D 0713	RH-EX0481BMZZ	S	BZX79B5V6-2%	AB
Q 0705,	RH-TX0106BMZZ	S	BC 547	AB	D 0714,	RH-EX0408BMZZ	S	BZX79C5V1	AB
0706					0715				
Q 0708	RH-TX0130BMZZ	S	BC 338-40	AB	D 0717	RH-EX0495BMZZ	S	BZX79-75V-2%	AB
Q 0801,	VS2SC2412KQ-1	J	2SC2412	AA	D 0718	RH-EX0419BMZZ	S	BZX79C15V	AB
0802,					D 0719	RH-DX0505BMZZ	S	1N4935	AB
0803,					D 0720	RH-EX0407BMZZ	S	BZX79C4V7	AA
0806,					D 0724	RH-EX0412BMZZ	S	BZX79C7V5	AB
1001,					D 0801	RH-DX0508BMZZ	S	Diode SMD	AB
1002,					D 0802	RH-DX0045BMZZ	S	1N4148	AA
1003					D 0803	RH-DX0508BMZZ	S	Diode SMD	AB
Q 1006	VS2SA1037KQ-1	J	2SA1037	AA	D 1002,	RH-DX0045BMZZ	S	1N4148	AA
Q 1007,	VS2SC2412KQ-1	J	2SC2412	AA	1003,				
1008,					1005,				
1010					1006,				
Q 1011	RH-TX0106BMZZ	S	BC547	AB	1007,				
Q 1012,	VS2SC2412KQ-1	J	2SC2412	AA	1008,				
					1009,				
					1010				
					D 1011	RH-PX0290CEZZ	S	LED	AE
					D 1012	RH-DX0045BMZZ	S	1N4148	AA
DIODES					PACKAGED CIRCUIT				
D 0202,	RH-DX0045BMZZ	S	1N4148	AA	POR 0701	RMPTP0028CEZZ	J	PTC	AG
0203					X 0801	RCRSB0200BMZZ	S	Crystal 17.734 MHz	AG
D 0204	RH-DX0542BMZZ	S	BB 809	AD	X 1001	RCRSB0217BMZZ	S	Crystal 11.0592 MHz	AH
D 0205,	RH-EX0413BMZZ	S	BZX79C8V2	AB		RCRSB0225BMZZ	S	Crystal 18 MHz (37AT-25H)	AM
0206					COILS				
D 0351	RH-DX0045BMZZ	S	1N4148	AA	L 0202	VP-DF120K0000	J	12 μ H	AB
D 0401,	RH-EX0412BMZZ	S	BZX79C7V5	AB	L 0204	VPAGMR33MR24N	S	0.33 μ H	AD
0402					L 0205	RCILP0227BMZZ	S	390 μ H	AE
					L 0303,	VP-DF3R3K0000	S	3.3 μ H	AB
					0304,				
					0401				
					L 0601	VP-CF4R7K0000	S	4.7 μ H	AB
					L 0602	RCILZ0004PEZZ	J	Delay Line	AN
					Δ L 0701	RCILF0111BMZZ	S	Mains Filter	AL
					L 0702,	RCILP0110CEZZ	S	Coil	AE
					0703				
					L 1002	VP-DF120K0000	J	12 μ H	AB
					L 1003	VP-DF6R8K0000	S	6.8 μ H	AB
					R 0608	VP-DF220K000	J	22 μ H	AB

REF. NO.	PART NO.	★	DESCRIPTION	CODE	REF. NO.	PART NO.	★	DESCRIPTION	CODE
CERAMIC FILTERS					RESISTORS				
CF 0301	RFILC0023CEZZ	S	6 MHz	AE	R 0243	RR-XZ0110BMZZ	S	6.8 1/3 W Fuse Resistor	AB
CF 0302	RFILC0268CEZZ	S	Filter	AF	R 0305	RR-XZ0204BMZZ	S	2.2 1/2 W Fuse Resistor	AB
SF 0201	RFILC0104BMZZ	S	J1951	AM	R 0504	RR-XZ0109BMZZ	S	5.6 1/3 W Fuse Resistor	AB
TRANSFORMERS					R 0506	RR-XZ0100BMZZ	S	1 1/3 W Fuse Resistor	AB
Δ T0601	RTRNF2031BMZZ	S	F.B.T.	BA	R 0532	RR-XZ0109BMZZ	S	5.6 1/3 W Fuse Resistor	AB
Δ T0700	RTRNZ0535BMZZ	S	Chopper	AR	R 0603	RR-XZ0200BMZZ	S	1 1/2 W Fuse Resistor	AB
CAPACITORS					R 0609	VRN-VV3ABR47J	J	0.47 1 W Metal Film	AA
C 0218	RC-FZ9104BMNJ	S	0.1 63 V Mylar	AB	R 0611	RR-XZ0142BMZZ	S	3.3K 1/3 W Fuse Resistor	AB
C 0225	VCEAGA1CW227M	J	220 16V Electrolytic	AC	R 0701	VRW-KX3HC5R6K	S	5.6 5 W Cement	AD
C 0236, 0241	VCEAGA1CW227M	J	220 16V Electrolytic	AC	R 0706	VRN-VV3ABR47J	J	0.47 1 W Metal Film	AA
C 0302	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	Δ R 0721, Δ 0722	VRC-U2AHG825K	J	8.2M 1/2 W Solid	AA
C 0304	VCEAGA1EW107M	S	100 25V Electrolytic	AB	MISCELLANEOUS PARTS				
C 0501	VCEAGA1EW227M	S	220 25V Electrolytic	AB	Δ F 0701	QFS-C2050BMZZ	S	Fuse 250V 2A	AD
C 0502	VCEAGA1VW107M	J	100 35V Electrolytic	AC	F 0702	QFSDH1009CEZZ	J	Fuse Holder	AA
C 0508	RC-FZ9823BMNJ	S	0.082 63V Mylar	AB	F 0703	QFSDH1010CEZZ	S	Fuse Holder	AB
C 0514	VCEAGA1EW227M	S	220 25V Electrolytic	AB	FB 0304	RBLN-0037CEZZ	J	Ferrite Bead	AB
C 0601	RC-FZ0135BMZZ	S	6800p 1.5KV Mylar	AE	FB 0602	RBLN-0020CEZZ	S	Ferrite Bead	AB
C 0602	RC-KZ0038CEZZ	J	470p 2KV Ceramic	AB	FB 0702, 1001	RBLN-0037CEZZ	J	Ferrite Bead	AB
C 0603	RC-FZ9223BMNJ	S	0.022 63V Mylar	AB	M 1000	RRMCU0201BMZZ	S	Remote Control Receiver	AN
C 0604	VCEAGA1AW227M	S	220 10V Electrolytic	AB	Δ S 0701, 1001, 1002, 1003, 1004	QSW-P0600BMZZ	S	Power Switch	AL
C 0605	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB	(A)	QPLGN0304CEZZ	J	Connector	AB
C 0606	RC-FZ6474BMNJ	S	0.47 250V Mylar	AE	(F)	QPLGN0505CEZZ	J	Connector	AB
C 0608	VCEAGA2CW105M	S	1 160V Electrolytic	AB	(G)	QPLGN0207CEZZ	J	Connector	AA
C 0615	VCKYPA2HB221K	S	220p 500V Ceramic	AB	(S)	QPLGN0241CEZZ	J	Connector	AA
C 0617	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB		QSOCZ0106BMZZ	S	RGB Connector	AE
C 0622	VCEAGA1AW227M	S	220 10V Electrolytic	AB	PWB-B CRT SOCKET UNIT				
Δ C 0702	RC-FZ0070BMZZ	S	0.1 250V Mylar	AD	TRANSISTORS				
C 0703, 0704, 0705	RC-KZ0029CEZZ	J	0.01 250V Ceramic	AC	Q 0870, 0871, 0872	RH-TX0110BMZZ	S	BF 422	AB
C 0706	RC-EZ0115BMZZ	S	68 400V Electrolytic	AM	Q 0883, 0885, 0887	RH-TX0124BMZZ	S	BF 421	AB
C 0707	RC-FZ9153BMNJ	S	0.015 63V Mylar	AB	DIODES				
C 0708	RC-FZ9683BMNJ	S	0.068 63V Mylar	AB	D 0880, 0881, 0882	RH-DX0045BMZZ	S	1N4148	AA
C 0709	RC-FZ9332BMNJ	S	3300p 63V Mylar	AB	COILS				
C 0711	RC-EZ0103BMZZ	S	100 160V Electrolytic	AF	L 0881	VP-CF120K0000	S	12 μH	AB
C 0712, 0713	VCEAGA1CW227M	J	220 16V Electrolytic	AC					
C 0714	VCEAGA1AW477M	S	470 10V Electrolytic	AB					
C 0715	RC-FZ9224BMNJ	S	0.22 63V Mylar	AC					
C 0716	VCEAGA1AW227M	S	220 10V Electrolytic	AB					
C 0718	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC					
C 0719	VCEAGA1VW227M	S	220 35V Electrolytic	AB					
C 0721	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB					
Δ C 0722	RC-KZ0156CEZZ	S	3300p 4KV Ceramic	AD					
C 0725	RC-KZ0035CEZZ	S	220p 2KV Ceramic	AC					
C 0801, 0802, 0803	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB					
C 0806	VCEAGA1AW477M	S	470 10V Electrolytic	AB					
C 0823, 0827	RC-FZ9104BMNJ	S	0.1 63V Mylar	AB					
C 0838	VCEAGA1AW477M	S	470 10V Electrolytic	AB					
C 1010	RC-FZ9122BMNJ	S	1200p 63V Mylar	AB					
C 1013	RC-FZ9104BMNJ	J	0.1 63V Mylar	AB					
C 1026	VCCSPA1HL101J		100p 50V Ceramic	AA					

REF. NO.	PART NO.	★	DESCRIPTION	CODE	REF. NO.	PART NO.	★	DESCRIPTION	CODE
CAPACITORS					MISCELLANEOUS PARTS				
C 0874	VCKYPA2HB102K	J	1000p 500 V Ceramic	AA	Δ	CACCB5001BMV1	S	AC Cord	AT
C 0876	RC-KZ0023CEZZ	J	4700p 2 kV Ceramic	AD		RRMCG1048BMSA	S	Remote Control Unit 37AM-23H	AW
C 0878	VCEAAA2DW106M	J	10 200 V Electrolytic	AC		RRMCG1051BMSA	S	Remote Control Unit 37AT-25H	AW
						VSP0080P-G5YB	J	Speaker	AL
						QANTL0037CEZZ	J	Antenna	AE
						TINS-6306BMN0	S	Operation Manual 37AM-23H	AK
						TINS-6307BMN1	S	Operation Manual 37AT-25H	AG
RESISTORS					CABINETS PARTS				
R 0882	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	1	CCABA1091BMV0	S	Front Cabinet Assembly 37AM-23H	BD
R 0883	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	1	CCABA1092BMV0	S	Front Cabinet Assembly 37AT-25H	BA
R 0884	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	1-1	HBDGB3505BMSA	S	Badge "SHARP"	AF
R 0885	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	1-2	JBTN-1023BMSA	S	Button Power	AB
R 0886	VRS-PU3DB153J	J	15 k 2 W Metal Oxide	AC	1-3	JBTN-1024BMSA	S	Buttons Channel/Volume	AD
R 0887	VRC-MA2HG272K	J	2.7 k 1/2 W Solid	AA	2	GCABB1041BMKA	S	Rear Cabinet	AY
MISCELLANEOUS PARTS									
Δ	QSOCV1429BMZZ	S	CRT Socket	AH					



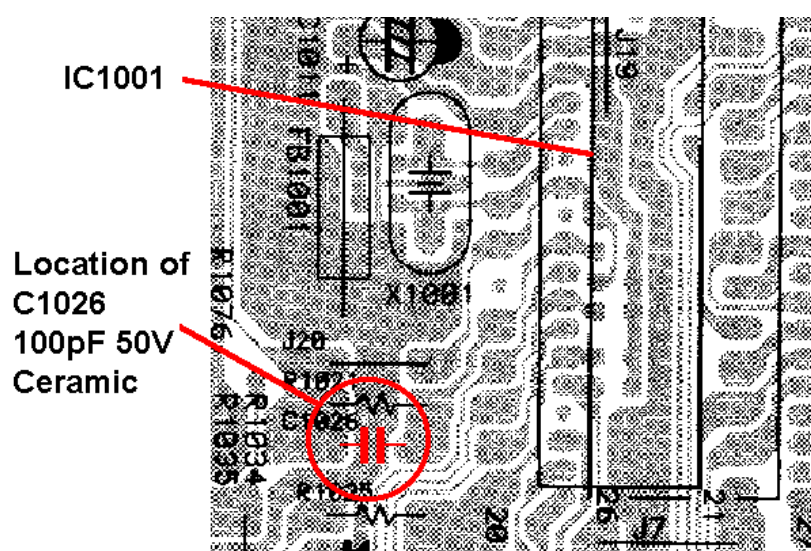
TELEVISION TECHNICAL BULLETIN

MODELS 37AM12H 37AM23H 37AT25H

SYMPTOM Tuner drift.

CAUSE C1026 (VCO decoupling – microprocessor output).

ACTION Replace C1026



<u>REF NO</u>	<u>PART NUMBER</u>	<u>DESCRIPTION</u>	<u>PRICE CODE</u>
C1026	VCCSPA1HL101J	Capacitor, 100pF 50V Ceramic	AA

Sharp Electronics (UK) Limited

Reference GW22032000-1

Revision 1



White – Carry out as required

Yellow – Carry out as required and whenever the unit comes in for service

Red – Carry out on all units